## DFC; F5A '9J5@ 5HCB'

: N&\$&\$\*

+#%#%- '- '%&#' %#%-



**Ci f'A lgglcb** Hc``YUX'U'WccfX]bUhYXz'Wa a i b]lmiYZ/cfhihc'a U\_Y'gi fY' Yj YfnobY'\Ug'U'd'UW'hc'WU``\ca Y'''

K Y'H\Ub\_'ci f'DUfftbYf'5[YbV]Yyg'Zcf'H\Y]f'Ugg]gHUbW']b'Wt``YVM]b['XUHU'' UbX'Ybgi f]b['XUHU'UWWTUWhZcf'ci f'Wta a i b]mmfYdcftg'''



### HJV'Y'cZ7cbhYbhg'

CJ9FJ=9K 1************************************	"%
D9F: CFA 5B79 <sup>°</sup> F5HB; G************************************	"(
GMGH9A G************************************	<b>"</b> +
: Ua ]`mˈ9a Yf[YbWhˈG\Y`hYf˙GnghYa ************************************	IIII ·
AYbÑg:9aYf[YbWnG\Y`hYf:GnghYa1""""""""""""""""""""""""""""""""""""	%\$
K ca YbNg 9a Yf[YbWnG\Y`hYf GnghYa """"""""""""""""""""""""""""""""""""	<b>‰</b>
	%(
DfYj Ybhjcb GnghYa 1999 Marian	%)
FUdIX FY!\ci alb[ Gnatya """""""""""""""""""""""""""""""""""	
Dyfa UbybhGi ddcfhjj Y < ci gjb[ 'Gnghya ''''''''''''''''''''''''''''''''''''	%+
	<b>&amp;\$</b>
; `UXXYb`7ca a i b]hm <i ]`m<ia="" gy:="" td="" ua="" y`yggbygg`dfyj="" ybh]cb'''''''''''''''''''''''''''''''''''<=""><td>8%</td></i>	8%
; `UXXYb 7ca a i b]lm <ci 77g'''''''''''''''''''''''''''''''''''<="" ]`m<ca="" dfyj="" gy:="" td="" ua="" y`yggbygg="" ybl]cb:=""><td>&amp;&amp;</td></ci>	&&
<a ]`]yg:="" bxuh]cb:dfy[bubhk="" ca="" ci="" td="" ua="" y`ygg:="" y`yggbygg:dfyj="" yb`<ca="" ybh]cb'''''''''''''''''''''''''''''''''''<=""><td>&amp;'</td></a>	&'
JC5C=GGJ: 'DfYj Ybh]cb'''''''''''''''''''''''''''''''''''	%(
7CCF8-B5H98 DC-BHC: 5779GG **********************************	&) '
; `UXXYb`7ca a i b]lmi <ci ]`mi8]j="" gy:="" td="" ua="" yfg]cb''''''''''''''''''''''''''''''''''''<=""><td>&amp;*</td></ci>	&*
BYNWfY 5WYgg: Ua ]m7Dc5# <ca """"""""""""""""""""""""""""""""""""<="" <ch]by="" td="" yygg=""><td><b>&amp;</b>+</td></ca>	<b>&amp;</b> +
BYh/WfY 5WYgg G]b[ `Y 5Xi `h7Dc5# <ca """"""""""""""""""""""""""""""""""""<="" <ch]by="" td="" y`ygg=""><td>&amp;,</td></ca>	&,
<i ************************************<="" gg`ubx`fud]x`fygc`i="" gy`7ccfx]buhyx`5wn="" h]cb="" td="" w_`yvyffm'<ci=""><td>&amp;,</td></i>	&,
: 5A =@MG< 9@H9FG ::::::::::::::::::::::::::::::::::::	<b>%</b>
MA 75'J Ub'6i fYb': Ua ]'m'G\Y'hYf'**********************************	' &
MK 75: Ua ]m7Ybh/f""""""""""""""""""""""""""""""""""""	1 1
G=B; @9'58  @H#NC  H<'G<9@H9FG************************************	' ( <sup>'</sup>
<i gy`9a="" td="" w_`yvyffm<ci="" yf[ybwmg\y`myf'''''''''''''''''''''''''''''''''''<=""><td>')</td></i>	')
@ h\YfUb`GcV]U`ĞYfj]Wfg: U]h\`A]gg]cb`G]b[`Y`5Xi`hg************************************	۱ *
@ h\YfUb`GcVNU`GYfj]WYgJ5`9aYf[YbWn; <cig]b[`'""""""""""""""""""""""""""""""""""""< td=""><td>' +</td></cig]b[`'""""""""""""""""""""""""""""""""""""<>	' +
♠ h\YfUb GcWU GYfj WgJ 5 9a Yf[YbWhc ci g]b[ ************************************	١,
A Ufm\Uj Yb`9b[U[Ya Ybh7YbhYf'!`G\Y`hYf& <ci ************************************<="" g]b[="" td=""><td>۱ -</td></ci>	۱ -
Gci h\YUgh#: f]YbXg`cZh\Y` <ca td="" y`ygg`a="" ybfg`g\y`hyf`''''''''''''''''''''''''''''''''''<=""><td>(\$</td></ca>	(\$
JC5C=J5 <sup>.</sup> 9a Yf[YbWhci g]b[""""""""""""""""""""""""""""""""""""	(%
MA 75 A YbNy#K ca Ybfg Cj YfZck ************************************	( &
MA 75JUb 6i fYb K ca YbNgG\Y`hYf"""""""""""""""""""""""""""""""""""	('
CI H= 957< DFC; F5A G::::::::::::::::::::::::::::::::::::	((
A Ufm\Uj Yb`Ci ffYUM\`''''''''''''''''''''''''''''''''''''	()
	( *
Gci h.YUghD5H<	(+
F5D=8 F9! <cl ************************************<="" g="8;" td=""><td>(,</td></cl>	(,
7ca a i b]hmG\Y`hYf`6cUfX`HfUbg]h]cb`Dfc[fUa """"""""""""""""""""""""""""""""""""	( -
<pre><ca """"""""""""""""""""""""""""""""""""<="" ]`]yg:="" bxuh]cb="" ci="" fud]x="" fy!\ci="" g]b[="" td="" ua="" y`ygg:=""><td>) \$</td></ca></pre>	) \$
<pre><ca ]`]yg:="" bxuh]cb="" ci="" g]b[""""""""""""""""""""""""""""""""""""<="" m:8dfud]xfy!\ci="" td="" ua="" y`ygg:=""><td>) '</td></ca></pre>	) '
<a bxuhjcb`m&bd`fud]x`fy!\ci="" ci="" g]b[************************************<="" j`jyg`:="" td="" ua="" y`ygg`:=""><td>) &amp;</td></a>	) &
HNY GU j Unjob 5fa mF UdjX FY! \ ci gjb[ """"""""""""""""""""""""""""""""""""	) '
H\YGUjUh]cb 5fa m>cV& <ci """"""""""""""""""""""""""""""""""""<="" g]b[="" td=""><td>) (</td></ci>	) (
JC5C=GGJ: FUd]XFY!\ci g]b[ """"""""""""""""""""""""""""""""""""	))
JC5C=FUd]XFY!\cig]b[************************************	) *

### : M&\$&\$ Dfc[fUa '9j U'i Uh]cb'

MA 75 F Ud]X F Y!\ci g]b[ '""""""""""""""""""""""""""""""""""""	),
MA 75 F Ud]X F Y!\ci g]b[ 8J Dfc YVM""""""""""""""""""""""""""""""""""""	
D9FA 5B9BHGI DDCFHJ9' <ci ************************************<="" g-b;="" th=""><th>- '</th></ci>	- '
5) ]g#5a Yh\nghiHF 5#GF 5 <sup>111111111111111111111111111111111111</sup>	۲\$
9ei ]t/Ug Th T5:""""""""""""""""""""""""""""""""""""	* %
7ca a i b]mi <i ''''''''''''''''''''''''''''''''''''<="" [="" byhk="" cf_6f][="" g]b[="" gxuy="" td=""><td>٠ &amp;</td></i>	٠ &
7ca a i b]m <ci &="" ***********************************<="" 6f][="" [="" byhk="" cf_="" q]b[="" qxuy="" td=""><td>٠ &amp;</td></ci>	٠ &
7ca a i b]mi ci g]b[ BYrk cf_ 7UggUXm5j Ybi Y 5dUfha Ybrg************************************	۲ (
7ca a i b]mkci g]b[ BYhkcf_7ca a i b]m57H <sup>111111111111111111111111111111111111</sup>	۲)
7ca a i b] $\text{fm} < \text{ci g}$ b[ BYfk cf_ 9Ugh: ]Zf\ 5j Ybi Y 5dUfha Ybfg''''''''''''''''''''''''''''''''''''	k *
7ca a i b]tmkci g]b[ BYtkcf_: Ua ]`mkca Yg¹""""""""""""""""""""""""""""""""""""	+ +
7ca a i b]mkci g]b[ BYhkcf_ ₺[ YkccX 7ci fh""""""""""""""""""""""""""""""""""""	k I
7ca a i blm <ci """"""""""""""""""""""""""""""""""""<="" <ci="" @="" alb[="" bykkcf="" ddcfhli="" gi="" td="" ualb[="" y=""><td><sup>k</sup> –</td></ci>	<sup>k</sup> –
7ca a i b]lm <ci &&bx="" bcfl\="" bylk="" cf_="" g]b[="" glfyyh"""""""""""""""""""""""""""""""""""<="" td=""><td>+\$</td></ci>	+\$
7ca a i b]mkci g]b[ BYkkcf_HYffUW D'UW""""""""""""""""""""""""""""""""""""	+%
7ca a i b]mi≺ci g]b[ BYhk cf_ DUfgcbg 5j Ybi Y**********************************	+&
7ca a i b]hm <ci '="" '@j="" ]="" byhk="" cf_="" d57hhyua="" fyvi="" g]b[="" td="" x]b[="" y'''''''''''''''''''''''''''''''''''<="" yg="" ≠0]h]uhjj=""><td>+'</td></ci>	+'
7ca a i b]tm <ci """""""""""""""""""""""""""""""""""<="" <="" bytk="" cf_guzy="" g]b[="" td="" uj="" yb=""><td>+(</td></ci>	+(
7ca a i b m <ci 'gf="" 5""""""""""""""""""""""""""""""""""""<="" byhk="" cf="" q b ="" td=""><td>+)</td></ci>	+)
7ca a i b]mi <a ***********************************<="" 5="" byhkcf_h="" gib[="" td=""><td>+*</td></a>	+*
7ca a i b]m≺ci g]b[ BYrk cf_	+*
7ca a i b]mkci g]b[ BYkkcf_Gci h\dc]bhD`UW¹""""""""""""""""""""""""""""""""""""	+,
7ca a i b]mi <i ]gcb''''''''''''''''''''''''''''''''''''<="" byhk="" cf_k="" g]b[="" td=""><td>+-</td></i>	+-
A Ufm\Uj Yb 7ca a cbg Uh7\Ubhm"""",	\$
$BUh]cbU^{-7}ifWFYg]XYbWg^{-7}ca\ a\ cbg^{-1}Uh^{-6}i\ \underline{W}]b[\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	%
BUnjcbU 7\i fW FYg]XYbWg 7ca a cbg Un; fUbh 1""""""""""",	&
BUhcbu 7\i fW Fyg]XYbWg 7ca a cbg Uh@j ]b[ghcb """"""""""""""""""""""""""""""""""""	1
BUncbu 7\i fW F Yg]XYbWg 7ca a cbg Un H 1 fx 1 1 1 5 L5 G 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	(
	)
$\label{eq:JC5C} \text{JC5C} =: \text{Ua } \text{ `mGi ddcfh' Y } < \text{ci } \text{g} \text{b} \text{ `}  `` `` `` `` `` `` `` `` `` `` `` `` ``$	*
$JC5C=JUb^{6}i fYb^{7}$	+
MA 75 (\$ K Ygh@cb[ 'GhfYYh'""""""""""""""""""""""""""""""""""	,
MA 75'(\$'K Ygh@cb['GhfYYh9ldUbg]cb"""""""""""""""""""""""""""""""""""	-
MA 75: fUb_`]b`GhUh]cb'""""""""""""""""""""""""""""""""""""	
MA 75# <ca 'dfc^yvm''''''''''<="" ```="gU]U\" td="" yz=""><td>- %</td></ca>	- %
MA 75 GVWHY fYX G]HYg < CA 9"""""""""""""""""""""""""""""""""""	- &
MK 75 K ⊕; G"""""""""""""""""""""""""""""""""""	- '
HF5BG±H€B5@ <cl ************************************<="" g-b;="" td=""><td>(</td></cl>	(
<il><!-- W_YVYffm</li--><li>ci gY HfUbg]h]cbU`@j ]b[ Dfc^YVh; """"""""""""""""""""""""""""""""""""</li></il>	. )
~;\\/`\\\\\ff~;~;\\\\H	. *
- 1 VV YVYTTTKCT GY HOOGITICOU @J JOE DICYVIIF< IVI JC5C=JYHYfUbg'HfUbg]hjcbU` <ci """"""""""""""""""""""""""""""""""""<="" g]b[="" td=""><td>- +</td></ci>	- +
A 9H< C8C@C; M <sup>111111111111111111111111111111111111</sup>	,
: N&\$&\$ GnghYa '9j U'i Uhjcb'A Yh\cXc'c[mi""""""""""""""""""""""""""""""""""""	- '
: M&\$&\$ Dfc[fUa 9j Ui Uh]cb A Yh\cXc`c[mi""""""""""""""""""""""""""""""""""""	<i>(</i> ھ) '



#### Cj Yfj ]Yk

7ca a i b]lmG\Y`hYf`6cUfX``YUXg`U WccfX]bUhYXžWa a i b]lmYZZcfhhc`a U\_Y`gi fY`Yj YfnobY`\Ug` U'd`UW`hc`WU``\ca Y"7G6`]g`h\Y`Wt``YWhj Y`]a dUWhcf[Ub]nUh]cb`Xf]j ]b[ ghfUhY[ nž UWNti bhUV]`]lmžWt``UVcfUh]cbžUbX`fYgci fWg`hc`UW\]Yj Y`h\Y`VYghci hWta Yg`Zcf`dYcd`Y`ZUNJb[`\ca Y`YggbYgg`]b`7c`i a Vi g`UbX: fUb\_`]b`7ci bhm'iK]h\`h\Y`gi ddcfhcZU`Wta dUgg]cbUhY` Wta a i b]lmžci f`gnghYa `cZWUfY`gYfj YX`a cfY`h\Ub`%) ž\$\$\$ dYcd`Y``Ugh`nYUf`k]h\`\ca Y`YggbYgg`dfYj Ybh]cbžg\Y`hYfžghfYYhci hYUW\žfUd]X`fY!\ci g]b[`žUbX`dYfa UbYbh` qi ddcfhij Y`\ci q]b[""

7G6 ]g Zi bXYX Vmh\Y 7]mcZ7c`i a Vi gžh\Y: fUb\_`]b 7ci bhm6cUfX cZ7ca a ]gg]cbYfgžh\Y I b]hYX K UmcZ7YbhfU`C\]cžH\Y 7c`i a Vi g: ci bXUh]cbžBUh]cbk ]XY: ci bXUh]cbž5a Yf]WUb 9`YVMf]WDck Yf: ci bXUh]cbžh\Y I "G"8YdUfha YbhcZ<ci g]b[ 'UbX I fVUb 8Yj Y`cda Ybhžh\Y GHUhY cZC\]cžUbX a Ubmch\Yf'di V`]WUbX df]j UhY ]bj Yghcfg"

7G6 cdYfUhYg'Ub'ci hWta Yg!VUgYX'zi bX]b['a cXY`žYghUV`]g\]b['a YUgi fUV`Y'dYfzcfa UbW'ghUbXUfXg'hc'a cb]hcf'U[YbV]Ygj\dfc[fYgg"'H\Y'7G6 6cUfX'cZHfi ghYYg'UXcdhg'h\YgY'dYfzcfa UbW'ghUbXUfXg'Ug'U'Wta dcbYbhcZh\Y]f'j ]g]cb'hc'WfYUhY'Ub'cj YfU``ghfUhY[mzcf']a dfcj ]b['h\Y'\ca Y`Ygg'gYfj ]WYg'gnghYa ždfcj ]X]b['Ub'ÎcdYb'Xccfzi 'UbX'k cf\_]b['hck UfX'h\Y' j ]g]cb'h\UhYj YfncbY'g\ci `X`\Uj Y'U'd`UW'hc'WV``\ca Y"''

6mgYhhlb[ dYfZcfa UbW ci hwta Y ghUbXUfXg h Uha YUgi fY "Yb[ h cZghUnz" ci g]b[ ci hwta Ygz g Y hYf#dfc[ fUa cww dUbwz fYw]x]j ]ga z UbX ch Yf ci hwta Ygz 7G6 kg dYfZcfa Ubw ci hwta Yg a cb]hcf h Y gi wwyg cZYUw dUfhbYf U[ Ybwh 7G6 U gc ]bw Xyg ]b ]hg Yj U i Uhjcb wta d`]Ubw k ]h UXa ]b]ghfUhjj Y UbX dfc[ fUa ghUbXUfXg "H Y gnghYa kg YZZYw]j YbYgg Ug U k \c`Y ]g a cb]hcfYX Vmei UfhYf mUbX Ubbi U fYj ]Yk g cZU[ [ fY[ UhYX XUhU Zfca dUfhbYf U[ Ybw]Yg"

HNY: M&\$&\$ Dfc[fUa '9j U'i Uh]cb fYdcfhYj U'i UhYg dfc[fUa g'i g]b[ '7G6Mj YghUv']g\YX' dYfZcfa UbW ghUbXUfXg" HNY fYdcfh]bWi XYg U``dfc[fUa g'Z bXYX Vmcf'i bXYf WcbhfUWfik]hN '7G6']b': ]gWU NYUf &\$&\$ fhi `m&\$%!>i bY &\$&\$L'': cf YUW dfc[fUa zhNY fYdcfh]bWi XYg Ub cj YfU``dYfZcfa UbW fUh]b[zgi a a UfmXYgWf]dh]cb UbX U'hUV Y g\ck ]b[ WV ffYbhdYfZcfa UbW k]hN fYgdYWhrc YghUv']g\YX ci hWca Y a YUgi fYg"

HNY'dfc[fUa Yj U'i Uh]cb U'gc ]bWi XYg'bcb!7G6 Zi bXYX'dfc[fUa g'i dfc[fUa g'h UhfYW]j Y ZYXYfU' J YhYfUbg 5ZZJ]fg cf < YU'h UbX < i a Ub GYfj ]Wg Zi bX]b[ 'UbX bYYX'hc dUfh]WldUhY ]b h Y cwl '7cbh]bi i a cz 7UfYžUbX'dfc[fUa g'h Uhj c'i bhUf] mdUfh]WldUhY ]b '7GDžh Y cwl '< a Y Ygg A UbU[Ya Ybh +b Zcfa Uh]cb GnghYa "H\Y Yj U'i Uh]cb cZh YgY'dfc[fUa g']g VUgYX cb dYfZcfa UbW fYei ]fYa Ybhg YghUv ]g\YX Vmh Y fYgdYWlj Y Zi bXYfg UbX'h Y cwl 'Wca a i b]mh H\Y Yj U'i Uh]cb cZ 7G6!Zi bXYX'dfc[fUa g']g ]bWi g]j Y cZh\Y Uvcj Y dYfZcfa UbW fYei ]fYa Ybhg"

#### 8UHU'Gci fWg

Dfc[fUa XYgVf]dh]cbg k YfY XYj Y`cdYX Zfca `]bZcfa Uh]cb dfcj ]XYX VmdUfhbYf U[YbVhighUZ''` 7ca d`]UbVY k ]h\ 7G6 UXa ]b]ghfUh]j Y`UbX dfc[fUa `ghUbXUfXg k Ug`UggYggYX`Vm7G6 ghUZ' Xi f]b[ '7M&\$% 'UbX VY[]bb]b[ 'cZ7M&\$&\$''

I b`Ygg`ch\Yfk]gY`bchYXždYfZcfa UbWY`XUHJ`k Ug`[Uh\YfYX`Zfca 'h\Y`7G6Ng`7GD`Zcf`h\Y`+#%#&\$% 'h\fci [\`%&#' %#&\$% 'fYdcff]b[`dYf]cX"'5``XUHJ`i gYX`]b`h\Y`fYdcfha Yh7G6` ei U`]miJggi fUbWY`gHJbXUfXgžk\]M\ fYei ]fY`WYffYbhXUHJ`UbX`U`-)ı `Wta d`Yh]cb`fUhY`Zcf`U``fYei ]fYX`7GD`XUHJ`j Uf]UV`Yg''`

#### GnghYa DYfZcfa UbW

7G6 ]g Yj U'i Uh]b['h,Y'GnghYa "Yj Y`f! Ua ] m'9a Yf[YbWh'G\Y'hYf'GnghYa žA YbÑg'9a Yf[YbWh'G\Y'hYf'GnghYa žA YbÑg'9a Yf[YbWh'G\Y'hYf'GnghYa ž9a Yf[YbWh'G\Y'hYf'GnghYa ž DfYj Ybh]cb 'GnghYa žF Ud]X'F Y!\ci g]b['GnghYa žUbX'DYfa UbYbh'Gi ddcfh]j Y'<ci g]b['GnghYa Ł'dYfZcfa UbW'ci hWta Y'[cU'g'j Yfgi g'UWh U'dYfZcfa UbW'": cf'ci hWta Y'XYZ]b]h]cbg'UbX'a Yh\cXc`c[]Ygzd'YUgY'gYY'h\Y'Yj U'i Uh]cb'a Yh\cXc`c[]Yg'gYWh]cbg'Uh'h\Y'YbX'cZh\]g'di V']Wh]cb"

9UW dyfzcfa UbW [cu k Ug UggyggYX Ug UW] y YX flWfgtzbchUW] y YX flBctzcf bchUdd ]WVY flB#5t" 5b Achieved Goal ]g XYZbYX Ug - \$i cf VYthYf cZU bi a Yf]WD [cu cf k ]th ]b) dyfWbhU[Y dc]bhg cZU dyfwbhU[Y [cu zyl Wdhk \yfy u yggyf cf [f Yuhyf j u i y h Ub h ]g j Uf]UbW Ugc ]bX]WhYX Ub UW] y X [cu fY"["z5j YfU[Y @yb[h cZGHUm[cu k Ug a Yh]ZUWh U UW] y Yx [cu fY"["z5j YfU[Y @yb[h cZGHUm[cu k Ug a Yh]ZUWh U UW] y Ya Ybh]g %\$) i cf ygg cZ[cut Not Applicable ]g Ugg][bYX k \yb U dYfZcfa UbW [cu k Ug bchUgg][bYX/h Y fYUgcb Zcf h ]g ]g Yl d U]bYX ]b h Y Zcchbch Zcf h Y fYgdYWh Y gnghYa "

9UW. 'gnghYa 'k Ug'Ugg][bYX'U'dYfZcfa UbW'fUh]b['cZ<][\žAYX]i a žcf'@ck 'Ug'XYhYfa ]bYX'Vm cj YfU``gnghYa 'UW.]Yj Ya YbhcZdYfZcfa UbW'ci hWta Yg'Zcf'h\Y'Yj U'i Uh]cb'dYf]cX"'FUh]b[g'UfY' VUgYX'cb'h\Y'Zc``ck]b[.''

Rating	Achievement of System Outcome Measure
<][\'	UWX]YjY'Uh`YUgh+)ı cZh\Y'a YUgi fYX'ci hWta Yg'UbX'Uh`YUghcbY'cZ
	h\Y`giVVVggZi``\cig]b[`cihVtaYg`fY]h\Yf`biaVYf`cf`dYfVVbhU[Y`
	ci Mta YŁ
A YX]i a ˈ	UWX]YjYUh`YUgh) \$1 Vih`Ygg'h\Ub'+) 1 cZh\YaYUgifYXcihWtaYg
@ck '	UMX]Yj Y``Yggʻh\Ubʻ) \$ı 'cZh\Y'a YUgi fYX'ci hMta Ygʻ

#### Dfc[fUa DYfZcfa UbW

Dfc[fUa dYfZcfa UbWrci HWta Y [cU`g`k YfY Wta dUfYX`k]h\ UWf U`dYfZcfa UbWrci XYhYfa]bY`Wtbg]ghYbWfk]h\ 7G6z̃7c7z̃cf<18 ghUbXUfXg": cfci hWta Y XYZ[b]h]cbg`UbX`a Yh\cXc`c[]Ygz̈d`YUgY`gYY`h\Y`j U`i Uh]cb`a Yh\cXc`c[]Yg`gYWf]cbg`Uhh\Y`YbX`cZh\]g`di V`]WUh]cb"

9UW dyfzcfa UbW [cu k Ug UggyggYX Ug UW] y YX flW gtzbch UW] y YX flBctzcf bch Udd ] WVY flB#5t" 5b Achieved Goal ] g XYZbYX Ug - \$1 cf VYHY f cz U bi a Yf] W [cu cf k ] h ] b ) dyfw bhu[ Y dc] bhg cz U dyfw bhu[ Y [cu z Yl w dhk \ YfY u Yggyf cf [f Yuh Yf j U i Y h Ub h ] g j Uf] UbW Ugc ] bx] whx Ub Uw] y j YX [cu f Y" ["z 5 j Yf U [Y @ b [h cz Ghum cu k Ug a Yh] z Uw [u u w] y j YX [cu f Y" ["z 5 j Yf U [Y @ b [h cz Ghum cu k Ug a Yh] z Uw [cu k Ug a Yh] z Uw [cu k Ug bch Ugg] [b Y X k \ Yb U d Yf z cf h Y f Ygd Y W ] j Y d f [f U a "

9UW\'dfc[fUa 'k Ug'Ugg][bYX'U'dYfZcfa UbW\'fUh]b[%cZ<][\žA YX]i a žcf'@ck 'Ug'XYhYfa ]bYX' Vmcj YfU``dfc[fUa 'UW\]Yj Ya YbhcZdYfZcfa UbW\'ci hWta Yg'Zcf'h\Y'Yj U'i Uh]cb'dYf]cX"'FUh]b[g' UfY'VUqYX'cb'h\Y'Zc``ck]b[.''

<sup>% ±</sup>b 'gca Y ']bghUbWrgzih Y 'dfc YVMik Ug'hcc bYk 'hc Yj U'i UhY/h\YfYZcfYz'U'dYfZcfa UbWr fUh]b[ k Ug'bchUgg][ bYX"'



Rating Achievement of Program Outcome Measure<sup>1</sup>

< ][ \ UVX]Yj Y Uh`YUgh+) ı cZh\Y a YUgi fYX ci hWta Yg'UbX Uh`YUghcbY cZ

h\Y'gi WWgqZi`\ci g]b[ ci hWa Yg fY]h\Yf bi a VYf cf dYfWbhU[Y

ci hwta YŁ

A YX]i a UWX]Yj Y Uh`YUqh) \$1 Vi h`Yqq h\Ub +) 1 cZh\Y a YUqi fYX ci hWta Yq

@ck UWN]Yj Y Ygg h\Ub') \$1 'cZh\Y'a YUgi fYX'ci hWta Yg'

Dfc[fUa g`fUhYX`Ug`î@ck`i`cf`YI dYf]YbV]b[``cb[!ghUbX]b[`UbX#cf`gYf]ci g`dfc[fUa ']ggi Yg`UbX#cf`gnghYa ]WU[YbWhWtbWfbg`UfY`\UbX`YX`Vm7G6`h\fci [\`U'ei U`]hm]a dfcj Ya Ybh`dfcWfgg`UbX`fYW]j Y`U`WtbX]h]cbU`WtbhfUWhZca '7G6`]b`h\Y`Zc``ck]b[`Z]gWU`nYUf"

<sup>%-</sup>ZgYf]ci gʻUbXʻdYfg]ghYbhdfc[fUaʻbcb!dYfZcfa UbWr]ggi YgʻYl]ghYXʻdf]cfʻcfʻXi f]b[ˈh\Y´Yj Uʻi Uh]cbʻh]a YZfUa Yžh\Ybʻh\Yʻdfc[fUaʻ]gʻUgg][bYX`Uʻck YfʻfUh]b[ʻh\Ub'k\Uh]hgʻdfc[fUaʻUW]Yj Ya YbhcZdYfZcfa UbWrci hWta Ygʻk ciʻX`ch\Yfk]gY`k UffUbHʻ

DYfZcfa UbW'FUhjb[g'UhU'; 'UbW'

Outly WDS AND THE YE	DV/C7- C- 1 H-\ A//F 1 H-H- F 1
GnghYa #DfcYVMiBUa Y'	DYfZcfa UbW FUhjb[
: Ua j`m'9a Yf[YbWh'G\Y`hYf'GnghYa	@ck
A YbNg 9a Yf[YbWhG\Y`hYf'GnghYa	A YX]i a
K ca YbÑgʻ9a Yf[YbWhG\Y`hYf`GnghYa	A YX]i a ˈ
9aYf[YbWhG\Y`hYfGnghYa`	A YX]i a
DfYj Ybhjcb GnghYa	<][\'
FUd]XFY!\cig]b[GnghYa	<][\'
DYfa UbYbhGi ddcfhjjY <ci '<="" gjb[="" gnghya="" td=""><td>&lt;][\'</td></ci>	<][\'
<ca td="" y`yggbygg'dfyj="" ybh]cb<=""><td>·</td></ca>	·
; `UXXYb`7ca a i b]hm <ci ]`m<ca="" dfyj="" gy:="" td="" ua="" y`yggbygg="" ybh]cb`<=""><td>&lt;][\'</td></ci>	<][\'
; `UXXYb`7ca a i b]hm <ci 77g<="" ]`m<ca="" dfyj="" gy:="" td="" ua="" y`yggbygg="" ybh]cb:=""><td>A YX]i a ˈ</td></ci>	A YX]i a ˈ
<:: ' <ca '<="" bubhk="" ca="" dfy[="" dfyj="" td="" y`yggbygg="" yb="" ybh]cb="" zcf=""><td>&lt;][\ \ '</td></ca>	<][\ \ '
JC5C=GGJ: 'DfYj Ybhjcb'	<][\'
7ccfX]bUhYX`Dc]bhcZ5WVgg	
; `UXXYb`7ca a i b]lm <ci [`m8]j="" gy:="" td="" ua="" yfg]cb<=""><td>&lt;][\'</td></ci>	<][\'
BYhWfY:5WWgg: Ua]m7Dc5# <cayygg<ch]by< td=""><td>&lt;][\ \ '</td></cayygg<ch]by<>	<][\ \ '
BYhWfY 5WYgg G]b[ Y 5Xi h7Dc5# <ca <ch]by<="" td="" y="" ygg=""><td>A YX]i a</td></ca>	A YX]i a
<i gy`7ccfx]buhyx`5wwgg`ubx`fud]x`fygc`i="" h]cb%`<="" td="" w_`yvyffm<ci=""><td>B#5<sup>-</sup></td></i>	B#5 <sup>-</sup>
9a Yf[YbWhG\Y'HYfg	
MA 75 J Ub 6i fYb : Ua ] mG\Y hYf	A YX]i a
MK 75: Ua j`m7YbhYf'	@ck '
<i gy`9a="" td="" w_`yvyffm<ci="" yf[ybvmg\y`hyf`<=""><td>&lt;][\'</td></i>	<][\'
@GG:U]h\A]qq]cbG]b[`Y5Xi`hqflfUbhž, hžUbXBUbVnhjjD`UVYŁ	<][\ \ '
@ith.YfUb:GcVNU`GYfj]WYgJ5:9aYf[YbWh <cig]b[< td=""><td>A YX]i a ˈ</td></cig]b[<>	A YX]i a ˈ
A Ufm\Uj Yb 9b[U[Ya Ybn7YbhYfil GUZYhm	<][\'
A Ufm\UjYb 9b[U[Ya Ybh7YbhYf] G\Y`hYf& <ci g]b[<="" td=""><td>&lt;][\'</td></ci>	<][\'
Gci h\YUgh: f]YbXgcZh\Y <ca td="" y`ygga="" ybñgg\y`hyf<=""><td>@ck '</td></ca>	@ck '
JC5C=J5 9a Yf[YbWhkcig]b[	A YX]i a ˈ
MA 75 A YbNg#K ca YbNg Cj YfZck &	B#5 <sup>·</sup>
MA 75 JUb 6i fYb K ca YbÑg G\Y hYf	A YX]i a ˈ
Ci htyUW: Dfc[fUa g	·
A Ufm\Uj Yb Ci HYUW\ "	@ck '
A Ufm\Uj Yb 7Ud]hU`7fcggfcUXg GdYVJU` =a dfcj Ya Ybh8]ghfJWhCi hfYUW\`	A YX]i a ˈ
Gci h\YUghD5H<	A YX]i a ˈ
FUd]XFY!\ci g]b[	·
7G6 HfUbg]hjcb Dfc[fUa ! G]b[`Y 5Xi `h	A YX]i a
7G6 HfUbg]hjcb Dfc[fUa !: Ua ]`]Yg`	A YX]i a ˈ
<ca ]`]yg:="" bxuh]cb:fud]x:fy!\ci="" ci="" g]b[<="" td="" ua="" y`ygg:=""><td>A YX]i a ˈ</td></ca>	A YX]i a ˈ
<ca ]`]yg`:="" bxuh]cb`m&8d`fud]x`fy!\ci="" ci="" g]b[%<="" td="" ua="" y`ygg`:=""><td>B#5<sup>-</sup></td></ca>	B#5 <sup>-</sup>
@GG#: U]h\ `A ]gg]cb `GGJ: `FUd]X `FY!\ci g]b[ `	A YX]i a ˈ
H\Y`GU`j Uhjcb`5fa mFUd]X`FY!\ci g]b[`	A YX]i a ˈ
HNY GU'j Uhjcb 5fa m>cV& <ci g]b[<="" td=""><td>&lt;][\'</td></ci>	<][\'
JC5C=GGJ: FUd]XFY!\ci g]b[	<][ \ '
JC5C=FUd]XFY!\ci g]b[ `	<][ \ .

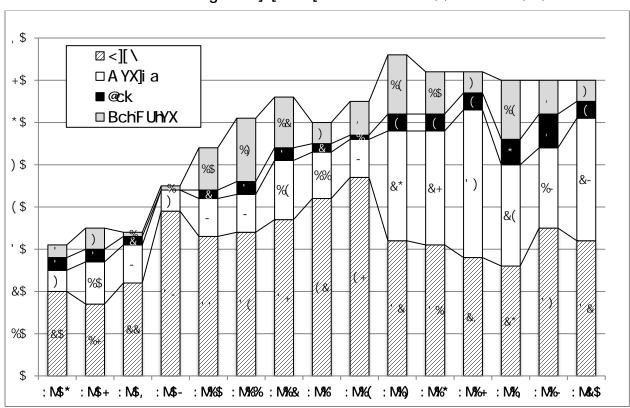
<sup>%&</sup>quot;Dfc:YVMinco"bYk "nc"Yj U"i UhY"" &"Dfc:YVMg"bchcdYb"Xi f]b["h\Y"Ybh]fY"fYdcfh]b["dYf]cX""

MA 75'FUd]X'FY!\ci g]b[ '	A YX]i a
MA 75 FUd]X FY!\ci g]b[ 8J Dfc^YVM%	B#5
DYfa UbYbhGi ddcfhjj Y' <ci gjb[<="" td=""><td>·</td></ci>	·
5`j ]g#5a Yh\nghiHF5#GF5'	A YX]i a
9ei]hUg <yu`h\ hf5<="" td=""><td>&lt;][\]</td></yu`h\>	<][\]
7ca a i b]lm <ci bylk="" cf_6f][[gxuy<="" g]b[="" td=""><td>&lt;][\</td></ci>	<][\
7ca a i b]lm <ci &<="" [gxuy="" byhk="" cf_6f][="" g]b[="" td=""><td>A YX]i a</td></ci>	A YX]i a
7ca a i b]m <ci 5dufha="" byhk="" cf_7ugguxm5j="" g]b[="" td="" y="" ybhg<="" ybi=""><td>&lt;][\'</td></ci>	<][\'
7ca a i b]m/ci g]b[ BYkkcf_7ca a i b]m/57H	A YX]i a '
7ca a i b]hm <ci 5dufha="" 5j="" 9ugh:="" ]zh\="" byhk="" cf_="" g]b[="" td="" y="" ybhg<="" ybi=""><td>A YX]i a</td></ci>	A YX]i a
7ca a i b]lm <ci :="" ]`m<ca="" bylk="" cf_="" g]b[="" ua="" yg<br="">7ca a i b]lm<ci 7ci="" `yk="" bylk="" ccx="" cf_="" fh<="" g]b[="" td="" ₺[=""><td>&lt;][ \</td></ci></ci>	<][ \
7ca a i b]lm <ci <ci="" @="" bykkcf_="" ddcfh]j="" g]b[="" g]b[<="" gi="" td="" ug]b[="" y=""><td>A YX]i a</td></ci>	A YX]i a
7ca a i b]lm <ci &&bx="" bcfh\="" byrk="" cf_="" gjb[="" grfyyh<="" td=""><td>A YX]i a</td></ci>	A YX]i a
7ca a i b]lm <ci bylk="" cf_="" d'uw<="" g]b[="" hyffuw="" td=""><td>&lt;][\'</td></ci>	<][\'
7ca a i b]m <ci 5j="" bykkcf_dufgcbg="" g]b[="" td="" y<="" ybi=""><td>A YX]i a</td></ci>	A YX]i a
7ca a i b]lm <ci '@j="" '±b]lnjunjj="" ]="" bylk="" cf_="" d57h'hyua="" fyvi="" g]b[="" td="" x]b[="" y<="" yg=""><td>A YX]i a</td></ci>	A YX]i a
7ca a i b]lm <ci <="" bylk="" cf_="" g]b[="" guzy="" td="" uj="" yb<=""><td>&lt;][\</td></ci>	<][\
7ca a i b]lm <ci 5<="" bylk="" cf_="" g]b[="" gf="" td=""><td>A YX]i a</td></ci>	A YX]i a
7ca a i b]lm <ci bylk="" cf_hf5<="" gjb[="" td=""><td>A YX]i a ·</td></ci>	A YX]i a ·
7ca a i b]lm <ci bylk="" cf_hf5&<="" g]b[="" td=""><td>@ck</td></ci>	@ck
7ca a i b]hm <ci byhk.cf_="" g]b[="" gci="" h\dc]bhd`uw`<="" td=""><td>&lt;][\'</td></ci>	<][\'
7ca a i b]lm <ci g]b[ˈbylk.cf_k]`gcbˈ<="" td=""><td>&lt;][\'</td></ci>	<][\'
A Ufm\Uj Yb 7ca a cbg Uh7\Ublfm	<][ \ .
BUHcbU`7\i fW FYg]XYbWg7ca a cbg'Un6i W]b[\Ua	< ][ \ .
BUHcbU 7\i fW FYg]XYbWg7ca a cbg'Uh; fUbh	<][\'
BUhjcbU 7\i fW FYg]XYbWg 7ca a cbg Uh@j jb[ghcb	<][\'
BUHcbU 7\i fW FYg]XYbWg 7ca a cbg UnH\]fX	<][\]
	B#5
JC5C=: Ua]mGi ddcfn]jY' <ci g]b['<="" td=""><td>&lt;][/</td></ci>	<][/
JC5C=JUb'6i fYb'J]``U[Y'	<][\ ^ \\\]
MA 75 (\$ K Ygh@cb[ 'GhfYYh' MA 75 (\$ K Ygh@cb[ 'GhfYYh'9  dUbg]cb '	A YX]i a ` A YX]i a `
MA 75': fUb_`]b'GhUh]cb'	
NA 75. TOD_jb GIDIjeb NA 75# <ca 'dfc^yvm<="" ```:gu]u\="" td="" yzi=""><td>A YX]i a</td></ca>	A YX]i a
MA 75 GWUHYYYX G]HYg' < CA 9	<][\'
MK 75'K =B; G"	<][ / ·
HfUbg]h]cbU <ci g]b[<="" td=""><td>, , ,</td></ci>	, , ,
<i 'dfc^ywi<="" ]b[="" gy'hfubg]h]cbu`@j="" td="" w_yvyffm'<ci=""><td>A YX]i a</td></i>	A YX]i a
<i 'dfc^ywif<m<="" 'hfubg]h]cbu`@j="" ]b[="" gy="" td="" w_yvyffm<ci=""><td>&lt;][\</td></i>	<][\
JC5C=JYhYfUbg'HfUbg]hjcbU` <ci gjjb[<="" td=""><td>A YX]i a</td></ci>	A YX]i a
· -	

<sup>%&</sup>quot;DfcYVMihcc"bYk "hc"Yj U"i UhY""

#### 7cbWiglcb"

H\Y'Z|bX]b[g'ci h]bYX']b'h\]g'Yj U'i Uh]cb']bX]WUhY'U'[ccX'`Yj Y`cZdYfZcfa UbW'UbX'gYfj]W'dfcj ]g]cb'VmdUffbYf'U[YbV]Yg''H\Y'[fUd\'VY`ck']`i ghfUhYg'h\Y'bi a VYf'cZfUhYX'dfc[fUa g'VYhk YYb Z]gWU'nYUfg'&\$\$\* UbX'&\$&\$ VmfUh]b[ WUhY[cfm'7G6'Wa a YbXg'dUffbYf'U[YbV]Yg'cb'h\Y]f'dYfZcfa UbW'UbX'Wbh]bi YX'Wa a ]ha Ybhihc'ei U']mžfYgdcbg]j Y'gYfj]W'gžUbX'\ci g]b['Zcf'gca Y'cZh\Y'a cghj i `bYfUv'Y'a Ya VYfg'cZci f'Wa a i b]lmi 'UXi `hg'UbX'W\]XfYb'k\c'UfY'Uhf]g\_cZcf'Yl dYf]YbW'\ca Y`YggbYgg''7G6``cc\_g'Zcfk UfX'hc'k cf\_]b['k]h\'dUffbYf'U[YbV]Yg']b'h\Y'Wa ]b['mYUf'hc'Zi ff\Yf']a dfcj Y']bX]j ]Xi U'dfc[fUa g'UbX'gnghYa'WcfX]bUh]cb'''



Bi a VYf'cZdfcYVMg'VmfUhlb['WUhY[cfmVYhk YYb': N&\$\$\* 'UbX': N&\$&\$'

±0: M&\$&\$ž) dfc?YVMgci hcZ+\$dfc?YVMgkYfYbchfUhYX'Ug'VY]b[hccbYkhcYjUiUhYcfbchvY]b[cdYbXif]b[hccbYkhcYjUiUhYcfbchvY]b[cdYbXif]b[hccbYkhcYjUiUhYcfbch

#### 5Wbck YX[Ya Ybhg]

7G6 th Ub\_g dUfftbYf U[YbWrighUZZZcf th Y]f Ugg]ghUbWr]b Wta d Yh]b[ th ]g Yj U'i Uh]cb UbX th Y]f fygdcbg]j YbYgg th 7G6 Ng fYei Yghg Zcf ]bZcfa Uh]cb"7G6 UddfYV]UhYg th Y tha Y UbX YZZcfh[]j Yb VmU[YbWrighUZZ]b cfXYf th a U\_Y dfc[fUa g Vch gi WWggZi `UbX a YUb]b[Zi `th th cgY th Ym gYfj Y UbX th Y VfcUXYf Wta a i b]m"i

GnghYa g

#### : M&\$&\$ Dfc[fUa '9j U'i Uh]cb

GnghYa : Ua ] m9a Yf[YbVmG\Y`hYf GnghYa

5[YbV]Yg. ..... MK 75žNA 75.

DYflcX. +#%% ! %&# %#%-

DYfZcfa UbW." @ck

H\Y'Ya Yf[YbWng\Y'hYf'gnghYa Zcf'ZJa]']Yg'k]h\ W\]XfYb'Ya d\Ug]nYg'YZZWYbhi gY'cZ fYgci fwgz'WcgY'Wc'`UvcfUn]cb'Ua cb['dUfhbYf'U[YbW]Ygz'ghfYUa`]bYX'UXa]gg]cbz'UbX``]b\_U[Y'hc'gYfj]Wg'UbX#cf'\ci g]b['UbX'ei]W\_fY!\ci g]b['cZZJa]']Yg'k]h\ Uddfcdf]UhY'gi ddcfng''H\Y'a cXY`WbhYfg'cb'U'ÎZfcbhXccfl' UddfcUW hc'g\Y'hYf'UXa]gg]cbz'k]h\ 'h\Y'<aa Y`Ygg'<ch']bY'cdYfUhYX'VmBYhWlfY'a UbU[]b['U``]b]h]U'fYei Yghg'Zcf'g\Y'hYf'''; `UXXYb'7ca a i b]hm<ci gY'dfcj]XYg'ZJWY'hc'ZJWY'X]j Yfg]cb'gYfj]Wg'UbX']a a YX]UhY'Ya Yf[YbWng\Y'hYf']g'Uj U]'UV'Y'k\Yb'X]j Yfg]cb'hc'gJZYz'U'hYfbUh]j Y'\ci g]b[']g'bchdcgg]V'Y'''

HNY NK 75: Ua] m7YbhYfcdYbYX]bCVVkcVYf&\$\$) UbX]gUgHUhY!cZhNY!UfhZUVJJmHNUhUvVka a cXUhYgi d'hc) \$ZUa]]YgcbUXUJmVUg]gUbX'dfcj]XYgcbg]hYXUnVVUfYžaYU`gYfj]WYgžUbX'UXi hUbX'VX]X'UVVJjJhJYg"

±0 GYdhYa VYf &\$%) žhc UXXfYgg h\Y Yl dcbYbh]U` [fck h\ ]b ZJa ]m\ca Y`YggbYggžU'bYk ZJa ]m g\Y`hYf'k]h\ gdUW hc gYfj Y'i d'hc \* ( ZJa ]]Yg cdYbYX'UhJ Ub 6i fYb '7YbhYf''G]bW A Um% &\$%\* žh\Y bYk ZJa ]mg\Y`hYf'\Ug'VYYb cdYfUhYX'Vm\A 75"

H\Y < ca Y Ygg < ch]bY cdYfUhYX VmBYh7UfY dfcj ]XYg 7ccfX]bUhYX Dc]bhcZ5WWgg ff7Dc5Ł gYfj ]Wg fY UhYX hc Ya Yf[ YbWhg\Y hYf UWWgg Zcf ZJa ] ]Yg"H\Y [ cU g cZh\Y 7Dc5 UfY hc fYXi W h\Y bi a VYf cZZJa ] ]Yg k\c UfY UXa ]hhYX hc ZJa ] mg\Y hYfg h\fc [\X]j Yfg]cb hc a cfY Uddfcdf]UhY Wa a i b]mmfYgci fWg UbX hc ]a dfcj Y h\Y ZJa ] ]YgÑYl dYf]YbW UWWgg]b[ g\Y hYf" H\Y \ch]bY k Ug XYg][ bYX i g]b[ U W) WbhYf a cXY k ]h\ [ fYUhYf Ya d\Ug]g cb dfYj Ybh]cb UbX X]j Yfg]cb YZZcfng": Ua ] ]YggYY\_]b[ Ya Yf[ YbWmg\Y hYf ]b]h]U mUWWgg h\Y 7Dc5 j ]U h\Y \* %( !&+( !+\$\$\$ d\cbY `]bY k \]W ]g Ubgk YfYX VmXYg][ bUhYX 7Dc5 ghUZ D\cbY `]bYg UfY Ubgk YfYX &( !\ci fg U XUnxYj YfmXUmcZh\Y nYUf"5ZhYf h\Y d\cbY \W `z U ZJW !hc!ZJW Uddc]bha Ybhk ]h\; ` `UXXYb 7ca a i b]hm<ci gY ]g dfcj ]XYX hc YUW ZJa ] mhc Z fh\Yf UggYgg h\Y]f bYYX Zcf g\Y hYf"5Xa ]gg]cb hc h\Y g\Y hYf gnghYa `cWW fg k \Yb bc ch\Yf cdh]cb Yl ]ghg Zcf h\Y ZJa ] m'

5 W]h]w)`Wa dcbYbhcZh\Y`ZJa ]mg\Y`hYf`gnghYa ]g`UÎ <ci g]b[:]fghi UddfcUW\hc UggYgga YbhUbX`fYZYffU`hc`h\Y`bYl hghU[Y`cZ\ci g]b[žk]h\ U`ZcWg`cb`ei ]w\_`ma cj ]b[ ZJa ]`]Yg`hc`\ci g]b[ 'UbX`Ybgi f]b[ 'h\UhUddfcdf]UhY`gi ddcfhg`UfY`]b`d`UW\hc Ybgi fY`cb[!hYfa \ci g]b[ ghUV]`]mh'BYl hghYd`\ci g]b[ 'cdh]cbg`]bWi XY`F Ud]X`FY!\ci g]b[ žDYfa UbYbh Gi ddcfhji Y`<ci g]b[ žUbX`ch\Yf`dYfa UbYbh\ci g]b[ k]h\ci hIfUbg]hcbU`gi ddcfhg'': cf` ZJa ]`]Yg`Yl ]h]b[ 'hc`dYfa UbYbh\ci g]b[ žZ]bUbW]U`Ugg]ghUbW' Zcf`fYbhžgYW f]mhXYdcg]hžUbX#cf` i h]`]h]Yg`]g`Uj U]`UV`Y`h\fci [\`h\Y`8]fYWh7`]Ybh5gg]ghUbW' dfc[fUa `UXa ]b]ghYfYX`Vm7G6'''`

CbW UggYggYX VmYa Yf[YbVmg\Y`hYf`ghUZZZJJa]]]Yg`k\c`bYYX`hfUbg]h]cbU`gi ddcfng`UfY fYZYffYX hc`h\Y`F Ud]X`FY!\ci g]b[`dfc[fUa g`Zcf`\ci g]b[`d`UWa YbhUgg]ghUbW`z]bWi X]b[`Z]bUbV]U`Ugg]ghUbW`UbX`g\cfh\hYfa z`]b!\ca Y`hfUbg]h]cbU`gYfj ]W`g`cbW`\ci gYX"`H\Y`g\cfh\hYfa gi ddcfhjj Y`gYfj ]W`g`UfY`]bhYbXYX`hc`Ugg]ghZJa]`]Yg`]b``cVWh]b[`dYfa UbYbhz`UZZcfXUV`Y\ci g]b[`k]h\]b`U`g\cfh\h]a YZfUa Y`cZfYZYffU`"`Hc`UWMa d`]g\`h\]gz`VWgY`a UbU[Yfg`\Y`d`Z]bX`gi]hUv`Y`UbX`UZZcfXUV`Y\ci g]b[`UbX``]b\_ZJa]`]Yg`hc`7G6!UXa]b]ghYfYX`Z]bUbV]U``Ugg]ghUbW'"



Dfc[fUa dUfh]V]dUbhg md]VVi`mfYW]j Y`VVgY`a UbU[Ya YbhZcf'' hc'\* a cbh\g`UbX`Z]bUbV]U`Ugg]ghUbW`zmd]VVi`mVtbg]gh]b[cZfYbhUbX`XYdcg]h'CbW`h\Y`ZJa]`m]g`\ci gYXz`VVgY`a UbU[Ya YbhgYfj]WYg`UbX``]b\_U[Yk]h\gi ddcfh]j Y`gYfj]WYg`]b`h\Y`Vta a i b]m\*Vtbh]bi Y`i bh]`h\Y`ZJa]`m\Ug`Uw\]Yj YX`U`gi WW`ggZi``\ci g]b[ci hVta Y`l a YUb]b[h\Ungi ZZ]V]Vbh\ci gY\c`X`]bVta Y`]g`Uj`U]`UV`Y`hc`UZZcfX`\ci g]b[i UbX#cfi bh]`h\Y`ZJa]`m\Ug`YbXYX`WtbhVhkk]h\h\Y`dfcj]XYf"H\fYY`U[YbV]Wg`dfcj]XY`FUd]X`FY!\ci g]b[gYfj]WYg`H\Y`GU`j Uh]cb`5fa nti<ca Y`Ygg`: Ua]]`]Yg`: ci bXUh]cbzUbX`Jc`i bhYYfg`cZ5a Yf]VV"``

BYk 'fUd]X'fY!\ci g]b[ 'gYfj ]Wg'Zcf'HfUbg]h]cb'U[ Y'nnci h\ 'UbX'j ]WfJa g'cZXca Ygh]ViJ ]c'YbW' ghUfhYX'Ug'cZ>i 'm'% &\$\% "'<ca Y'Ygg': Ua ]']Yg': ci bXUh]cb'UbX'MA 75'cdYfUhY'h\YgY' dfc[fUa g'''+b'UXX]h]cbzhkc'g\Y'hYf!VUgYX'dfc[fUa g'UfY']b'Ub']b]h]U''d]'ch]b[ 'd\UgYzcdYfUhYX' VmMA 75'UbX'NK 75"

#5: M&\$&\$zhc`Ybgi fY'h\UniUXYei UhY'Ya Yf[YbWhg\Y`hYf`WUdUV]hm]g'Uj Uj`UV`Yz`7G6'WcbhfUWhYX' k]h\ NA 75'UbX'NK 75 hc`dfcj]XY'cj YfZck 'Ugg]ghUbWr'Zcf'ZUa j`]Yg']b'bYYX'cZYa Yf[YbWhi g\Y`hYf'VYncbX'h\Y]f'fY[i`Uf'WUdUV]hm'i'

: N&\$&\$: Ua ]mG\Y`hYf`GnghYa Dfcj ]XYf`UbX`7UdUV]hmfi+#%#% 1 \*# \$#&\$£%

5[YbWh Dfc[fUa		7UdUV¶mi filUa []YgLi
MK 75	: Ua ]`m7YbhYf`	) \$ .
MA 75 <sup>-</sup>	: Ua ]`m'G\Y`HYf'	*(
	Total Capacity	114

GnghYa Ci hWta Y 5WN]Yj Ya Ybh+#%#% hc %&# %#% i

A YUgi fY <sup>.</sup>		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa ]!Ubbi Uʻ 5VM Uʻ	5 <b>/\</b> \]Yj YX <sup>.</sup>
<ci gy\c`xg`gyfj="" td="" yx`<=""><td></td><td>*)\$</td><td>+*+</td><td>M∕g<sup>·</sup></td></ci>		*)\$	+*+	M∕g <sup>·</sup>
Gi WWggZi `` <ci 'ci="" g]b[="" hwta="" td="" yg'<=""><td></td><td>'+)</td><td>&amp;, ,</td><td>Bc<sup>·</sup></td></ci>		'+)	&, ,	Bc <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" lwta="" td="" yg'<=""><td>1 '</td><td>+\$`</td><td>().</td><td>Bc<sup>·</sup></td></ci>	1 '	+\$`	().	Bc <sup>·</sup>
5j YfU[Y@Yb[h\cZGHJm	8Ungi	1 '	( - '	Bc <sup>·</sup>
FYVJK]j ]ga ''	1 .	O%\$ ·	) .	M∕g <sup>·</sup>
A cj Ya Ybl⁴	1 .	%) .	( .	B#5 <sup>-</sup>

-

<sup>%</sup>NK 75'dfcj ]XYg'cj YfZck Zcf'i d'hc %\$ ZJa ] ]Yg'b][\hin'i NA 75'Yl dUbXg'WdUNJimZcf'cj YfZck 'Ug'bYYXYX''

<sup>&</sup>amp; A cb]hcfYXžVi hbchYj U`i UhYX"

#### : M&\$&\$ Dfc[fUa '9] U'i Uhicb'

GnghYa. A YbÑy 9a Yf[YbWnG\Y`hYf GnghYa

5[YbV]Yg." @ h\YfUb'GcV]U'GYfj]WYgzA Ufm\UjYbzGci h\YUghz=bVVzJc'i bhYYfg'cZ

5a YfMU'UbX'M 75

DYf]cX. +#%# ! %# %#%

DYfZcfa UbW.... A YX]i a

H\Y'a YbNg'Ya Yf[YbWrig\Y'hYf'gnghYa ']g'Wta df]gYX'cZh\fYY'a YbNg'g\Y'hYf'dfc[fUa gžhk c'g\Y'hYf'dfc[fUa g'Zcf'j YhYfUbgžUbX'cbY'g\Y'hYf'Zcf']bYVf]UhYX'a Yb'k\c'UfY'Yl dYf]YbVNb['\ca Y'YggbYgg"'Hc[Yh\Yfžh\YgY'dfc[fUa g']bWl XY'U'bcfa U'flbcb!cj YfZck ŁVWdUVNmcZ' - + 'VYXg"'Jc'i bhYYfg'cZ5a Yf]VVVVcgYX'h\Y]f'(\$'VYX'VVdUVNma YbNg'g\Y'hYf'Ug'cZ; bY'' \$ž &\$% "'

H\Y`cVV`<ca Y`Ygg'<ch`]bY'cdYfUhYX VmBYh7UfY'\Ug'dfcj ]XYX`7ccfX]bUhYX`Dc]bhcZ5VWYgg'f7Dc5LgYfj ]W'g'fY`UhYX'hc Ya Yf[ YbWng\Y`hYf`UWWgg Zcf`g]b[ `Y`UXi `hg`g]bW': YVfi Ufm&- ž &\$%&"H\Y`[cU'g'cZh\Y`7Dc5'UfY'hc fYXi W'h\Y'bi a VYf`cZg]b[ `Y`UXi `hg`k\c'UfY'UXa ]hhYX'hc h\Y'UXi `hgnghYa 'h\fci [\X]j Yfg]cb hc a cfY'Uddfcdf]UhY'Wa a i b]hmfYgci fW'g'UbX'hc la dfcj Y'h\Y'g]b[ `Y'UXi `hg\YilydW'UWWgg]b[ `g\Y`hYf"5Xa ]gg]cb hc h\Y'UXi `hg\Y`hYf' gnghYa cWWYg]b[ `Y'UXi `hg\Yilyd dYf]YbW'UWWgg]b[ `g\Y`hYf"5Xa ]gg]cb hc h\Y'UXi `hg\Y`hYf' gnghYa cWWYfg'k\Yb'bc ch\Yfcdhjcb Yl ]ghg'Zcf'h\Y'W]Ybh'H\Y'\ch]bY'k Ug'XYg][ bYX`i g]b[ `U'\W'``WbhYf`a cXY`k ]h\ [fYUhYf`Ya d\Ug]g'cb dfYj Ybhjcb UbX'X]j Yfg]cb YZZcfhg''\d\X]j ]Xi U`g' gYY\_]b[ Ya Yf[ YbWng\Y`hYf`]b]h]U`mUWWgg'h\Y`7Dc5'j ]U'h\Y`\*%(!&+(!+\$\$\$'d\cbY``]bY'k\]W'` g'Ubgk YfYX`WmXYg][ bUhYX`7Dc5'ghUZZ''D\cbY``]bYg'UfY'Ubgk YfYX`&(!\ci fg'U'XUnžYj YfmXUm cZh\Y'nYUf''``

: fca `CVMcVYf hc`A UfWkžh\Y`UXi `hg\Y`hYf`gnghYa `]a d`Ya Ybhg`Ub`cj YfZck d`Ub`hc`Ybgi fY`h\Uh`bc`]bX]j ]Xi U`gYY\_]b[ g\Y`hYf`]g'hi fbYX`Uk UmXi f]b[ gYj YfY`k YUh\Yf"5g`dUfhcZh\Y`cj YfZck 'd`Ubžh\Y`bi a VYf`cZYa Yf[ YbWhg\Y`hYf`VYXg`Zcf`g]b[ `Y`UXi `hg`]g`]bVMYUgYX`]b`Yl ]gh]b[ `ZUNJ]h]Yg`UbX`UXX]h]cbU``ZYI ]V`Y`VWdUVJhmi]g'a UXY`Uj U]`UV`YžUg`bYYXYX"8i f]b[ `k Ufa Yf`a cbh\gžh\Y`UXi `hg\Y`hYf`gnghYa `\Ug`U`Z]l YX`VWdUVJhmi'\d`: N&\$&\$žNA 75`dfcj ]XYX`UXX]h]cbU``cj YfZck `WWdUVJhmiZcf`g]b[ `Y`a Yb`Uhh\Y`J Ub`6i fYb`7YbhYf`k\Yb`bc`ch\Yf`g\Y`hYf`VYXg`k YfY`Uj U]`UV`Y"``



: N&\$&\$ A YbNyG\Y HYF7UdUNJmmf1#%#% 1 \*# \$#&\$E

5[YbWh	A YbfgʻDfc[fUa gʻ	FY[i`Uf	FY[i `Uf` Cj YfZck	GYUgcbU` Cj YfZck `	HcHJ` 7UdUV <b>y</b> hmi
@th.YfUb~GcVJU~GYfj]WYg	: U]h\ A ]gg]cb cb * h GhfYYh	- ) ·	%) .	\$.	%%\$ ·
@th.YfUb~GcVJU~GYfj]W/g	: U]h\ A ]gg]cb cb , h 5j Ybi Y	-) .	\$.	\$.	-) .
@thYfUb~GcVJU~GYfj]WYg	J5'9a Yf[YbWn <ci g]b[<="" td=""><td>&amp;\$ ·</td><td>\$.</td><td>\$.</td><td>&amp;\$ ·</td></ci>	&\$ ·	\$.	\$.	&\$ ·
A Ufm\Uj Yb	9b[U[Ya Ybh7YbhYf f#bYVf]UhY g\Y`hYfL	(&	\$	\$	(&
Gci h∖YUghž±bVV	: f]YbXg`cZh\Y` <ca td="" y`ygg``<=""><td>% \$</td><td>%) .</td><td>\$.</td><td>%()</td></ca>	% \$	%) .	\$.	%()
Jc`i bhYYfg'cZ5a Yf]WJ''	J5'9a Yf[YbWn <ci g]b[<="" td=""><td>%) .</td><td>\$.</td><td>\$.</td><td>%) .</td></ci>	%) .	\$.	\$.	%) .
MA 75 <sup></sup>	A YbÑgʻCj YfZck %	\$.	\$.	% \$ <sup>-</sup>	% \$
	Total Capacity	' - + ·	' \$ <sup>-</sup>	% \$ <sup>-</sup>	))+

Gnothya 'Ci hwta Y 5WN Yi Ya Ybh + #%#% 'hc '%&#' %#% '

A YUgi fY		A YUgi fY GYa ]!Ubbi ປ΄ ; cປ΄		5 <b>V\(</b> ]Yj YX <sup>.</sup>	
<ci gy\c`xg'gyfj="" th="" yx``<=""><th></th><th>&amp;%) \$ ·</th><th>&amp;\$' ( ·</th><th>M/g<sup>-</sup></th></ci>		&%) \$ ·	&\$' ( ·	M/g <sup>-</sup>	
Gi WWggZi`` <ci g]b['ci="" lwta="" td="" yg''<=""><td></td><td>) * , '</td><td>(\$-</td><td>Bc<sup>·</sup></td></ci>		) * , '	(\$-	Bc <sup>·</sup>	
Gi WWggZi`` <ci g]b['ci="" lwta="" td="" yg''<=""><td>1 '</td><td>1.1.3</td><td>&amp;+ ·</td><td>Bc<sup>·</sup></td></ci>	1 '	1.1.3	&+ ·	Bc <sup>·</sup>	
5j YfU[Y`@Yb[th`cZGtUm`	8Ungi <sup>.</sup>	()	(*.	M/g <sup>-</sup>	
FYVIJX]j ]ga ''	1 .	O%\$ ·		M/g <sup>-</sup>	
A cj Ya Ybh	1	% .		B#5 <sup>·</sup>	

%CdYbYX`%&#&#% "`7UdUW]fm]g`ZYI ]V`Y`VUgYX`cb`bYYX"` &`5Vfi U``]bWi XYg`cj YfZck "

BchUdd']WWY hc GUZYhricf'Cj YZck 'g\Y'hYfg"'A cb]hcfYXž'Vi hbchYj U'i UhYX"

#### : M&\$&\$ Dfc[fUa '9] U'i Uhicb'

GnghYa. K ca YbÑg 9a Yf[YbWnG\Y`hYf GnghYa

5[YbV)Yg. @ h\YfUb GcV)U GYfj ]WgžA Ufm\Uj YbžUbX NA 75

DYflcX. +#%#% ! '%## %#%

DYfZcfa UbW. ... A YX]i a ...

H\Y'k ca YbNg'Ya Yf[YbWrig\Y'H\f'gngH\a ]g'Wta df]gYX'cZHk c'k ca YbNg'g\Y'H\f'dfc[fUa gžUg'kY``'Ug'g\Y'H\f'dfc[fUa g'Zcf'jYH\fUbg'UbX']bYVf]UH\X'k ca Yb'k\c'UfY'\ca Y'Ygg'''Hc[YH\Yfz'h\YgY'dfc[fUa g']bWiXY'U'bcfa U'fIbcb!cjYfZck\E\WdUNJHmcZ&\%VYXg'''

H\Y`cVVI`<a Y`Ygg<ch`]bY`cdYfUhYX`VmBYh7UfY`\Ug`dfcj ]XYX`7ccfX]bUhYX`Dc]bhcZ5WVgg`f7Dc5LgYfj ]Wg`fY`UhYX`hc`Ya Yf[ YbWing\Y`hYf`UwVvgg`Zcf`g]b[ `Y`UXi `hg`g]bW`: YVfi Ufm&- ž &\$%&"H\Y`[cUg`cZ7Dc5`UfY`hc`fYXi W`h\Y`bi a VYf`cZg]b[ `Y`UXi `hg`k\c`UfY`UXa ]hhYX`hc`h\Y`UXi `hgnghYa 'h\fci [\`X]j Yfg]cb`hc`a cfY`Uddfcdf]UhY`Wa a i b]hmfYgci fWg`UbX`hc`]a dfcj Y`h\Y`g]b[ `Y`UXi `hg\Y`hYf`ghW`UWVgg]b[ `g\Y`hYf"5Xa ]gg]cb`hc`h\Y`UXi `hg\Y`hYf`gnghYa c\WVfg'k\Yb`bc`ch\Yf`cdh]cb`YI ]ghg`Zcf`h\Y`W]Ybh'H\Y`\ch]bY`k Ug`XYg][ bYX`i g]b[ `U`VU``WbhYf`a cXY`k]h\[fYUhYf`Ya d\Ug]g`cb`dfYj Ybh]cb`UbX`X]j Yfg]cb`YZcffrg"\*\x)j ]Xi U`g`gYY\_]b[ Ya Yf[ YbWing\Y`hYf`]b]h]U`mUwVvgg`h\Y`7Dc5`j ]U`h\Y`\*%(!&+(!+\$\$\$ d\cbY``]bY`k\]W\]g`Ubyk YfYX`VmXYg][ bUhYX`7Dc5`ghUZZ'`D\cbY``]bYg`UfY`Ubgk YfYX`&(!\ci fg`U`XUnžYj YfmXUmcZh\Y`mYUf"``

G\Y`HYF`gHUZZUbX`VWgY`a UbU[Yfg`Ugg]gh`]bX]j ]Xi U`g`k ]H\`UWWgg]b[`bYYXYX`VWgY`a UbU[Ya YbhUbX`\ci g]b[`gYfj ]Wygž]bWi X]b[`a YbhU`\YU`H\`WlfY`UbX`gi VgHUbW`UVi gY`hYUha Ybh'': cf`]bX]j ]Xi U`g`Yl ]h]b[`hc`dYfa UbYbh\ci g]b[`žZ]bUbV]U`Ugg]ghUbW`Zcf`fYbhz`gYWf]m\*XYdcg]hžUbX#cf`Ubmi h]`]h]Yg`]g`Uj U]`UV`Y`H\fci [\`H\Y`8]fYVM7`]Ybh5gg]ghUbW`dfc[fUa žUXa ]b]ghYfYX`Vm7G6"\M\75`dfcj ]XYg`fUd]X`fY!\ci g]b[`gYfj ]WYg`Zcf`g]b[`Y`UXi `hg`Ug`cZ\_i `m%z\*#&\$%+"`BYk `fUd]X`fY!\ci g]b[`gYfj ]WYg`Zcf`hfUbg]h]cb`U[Y`nci h\`UbX`j ]Wf]a g`cZXca Ygh]WJ]c`YbW`ghUfhYX`Ug`cZ;i `m%z\*&\$%-"<ca Y`Ygg`: Ua ]`]Yg`: ci bXUh]cb`UbX`M\75`cdYfUhY`h\YgY`dfc[fUa g"`

: fca 'CVMcVYf'hc'A UfW\zh\Y'UXi 'hg\Y'hYf'gnghYa']a d'Ya Ybhg'Ub'cj YfZck 'd'Ub'hc'Ybgi fY'h\Uh'bc']bX]j ]Xi U'gYY\_]b['g\Y'hYf']g'hi fbYX'Uk UmXi f]b['gYj YfY'k YUh\Yf''5g'dUfhcZh\Y'cj YfZck 'd'Ubz'h\Y'bi a VYf'cZYa Yf[YbWhg\Y'hYf'VYXg'Zcf'g]b['Y'UXi 'hg']g']bWfYUgYX']b'Yl ]gh]b['ZJWJ']h]Yg'UbX'UXX]h]cbU'zYi ]V'Y'WdUVJhm]g'a UXY'Uj U]'UV'Yz'Ug'bYYXYX''8i f]b['k Ufa Yf'a cbh\gz'h\Y'UXi 'hg\Y'hYf'gnghYa'\Ug'U'z]l YX'WdUVJhm'l+b': N&\$&\$z'NA 75'dfcj ]XYX'UXX]h]cbU'cj YfZck 'WdUVJhm'Zcf'g]b['Y'k ca Yb'Uh'h\Y'J Ub'6i fYb'7YbhYf'k\Yb'bc'ch\Yf'g\Y'hYf'VYXg'k YfY'Uj U]'UV'Y'''



: N&\$&\$ K ca YbNj G\Y`hYf 7UdUNjmfl+#%#% 1 \*# \$#&\$Ł

5[YbWń	K ca YbÑg'Dfc[fUa g'	FY[i`Uf	FY[i`Uf` CjYfZck	GYUgcbU` Cj YfZck`	HcHJ)" 7UdUV <b>ji</b> mi
@th.YfUb~GcVJU~GYfj]WYg~	: U]h\ A ]gg]cb BUbWhny D`UW	1 .	* '	\$.	((.
@th.YfUb~GcVJU~GYfj]WYg~	J59aYf[YbWn≺cig]b[	( '	\$.	\$.	( .
A Ufm\Uj Yb	9b[U[Ya Ybh7YbhYf f\byVf]UhYG\Y`hYfL	, ,	) .	\$ <sup>.</sup>	% .
MA 75 <sup>-</sup>	JUb 6i fYb K ca YbÑg G\Y`HYf	%) %	+ .	\$.	%), '
MA 75 <sup>-</sup>	K ca YbÑy'Cj YfZck%'	\$	\$	* + '	* + '
	Total Capacity	&\$% <sup>-</sup>	% .	* + .	&, * ·

GnothYa 'Ci hWta Y 5WN TYi Ya Ybh + #%#% 'hc '%&#' %#% '

A YUgi fY		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!Ubbi U` 5 <b>Vhi</b> U&`	5 <b>W</b> (]Yj YX
<ci gy\c`xg'gyfj="" th="" yx'<=""><th></th><th>- +) .</th><th>%\$\$* ·</th><th>M/g<sup>-</sup></th></ci>		- +) .	%\$\$* ·	M/g <sup>-</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg''<=""><td></td><td>&amp;) ) ·</td><td>&amp;\$- ·</td><td>Bc<sup>·</sup></td></ci>		&) ) ·	&\$- ·	Bc <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg''<=""><td>1 '</td><td>1.1.1</td><td>&amp;* ·</td><td>Bc<sup>·</sup></td></ci>	1 '	1.1.1	&* ·	Bc <sup>·</sup>
5j YfU[Y`@Yb[h\`cZGhUm`	8Ung <sup>.</sup>	().	(+.	M/g <sup>-</sup>
FYVJK]j ]ga '	1 .	O%\$ ·	- •	M/g <sup>-</sup>
A cj Ya Ybh	1 '	%) .	%\$ <sup>·</sup>	B#5 <sup>-</sup>

 $<sup>\</sup>begin{tabular}{l} \label{lem:conditional} \begin{tabular}{l} \begi$ 

<sup>% 5</sup>VM U JbW XYgʻcj YfZck "BchUdd']WVY hc GUZYhmcf Cj YfZck g\Y'hYfg"A cb]hcfYXžVi hbchYj U'i UhYX"

#### : M&\$&\$ Dfc[fUa '9; Ui Uh]cb

GnghYa. 9a Yf[YbWhG\Y`hYf GnghYa

5[YbV)]Yg." @ h\YfUb'GcV]|U'GYfj]|WYgzA Ufm\UjYbzGci h\YUghz=bVVzUc'i bhYYfg'cZ

5a Yf]WUžIVA 75žUbX'IVK 75°

DYf]cX. +#%#% ! %&# %#%

DYfZcfa UbW. ... A YX]i a

7G6 ]g dfygybh]b[ 'h,Y Ya Yf[ YbVhng\Y 'hYf gnghYa 'Ug U'Vta V]bUh]cb cZU` 'h,Y Ya Yf[ YbVth g\Y 'hYfg ]b '7c' i a Vi g 'UbX': fUb\_`]b '7ci bhn% 'H,Y 'U[ [ fY[ Uh]cb 'VY'ck ']bWi XYg 'h,Y 'dfc[ fUa g ]b 'h,Y : Ua ] 'mGnghYa žA YbNg GnghYa žUbX K ca YbNg GnghYa 'gYVh]cbg cZh, ]g 'Dfc[ fUa '9j U'i Uh]cb 'F Ydcfh''

: N&\$&\$ '9a Yf[YbWmG\Y`hYf'GngmYa 'Dfcj]XYfg'UbX'7UdUNJmm

5[YbWh	G\Y'hYf'HhalY'	FY[i `Uf	FY[i `Uf` Cj YfZck	GYUgcbU* Cj YfZck	HcHJ` 7UdUV¶hm
@ h\YfUb`GcVJU` GYfj]Wg	G]b[`Y`5Xi`hG\Y`HYf' J5'9a Yf[YbWhi <ci g]b[<="" td=""><td>&amp;) &amp;<sup>·</sup></td><td>&amp;%<sup>-</sup></td><td>İ.</td><td>&amp;+' ·</td></ci>	&) & <sup>·</sup>	&% <sup>-</sup>	İ.	&+' ·
A Ufrn\Uj Yb	±bYVf]UhY'G\Y`hYf'	) \$ .	) .	i.	)).
Gci h\YUghž±bW′	G]b[`Y`5Xi `h'G\Y`hYf'	% \$	%) .	į.	%()
Jc'i bhYYfg'cZ5a Yf]WU	J5'9a Yf[YbWhci g]b[	%) .	İ.	İ.	%) .
NA 75	G]b[`Y`5Xi`hG\Y`HYf GYUgcbU`CjYfZck : Ua]`mG\Y`HYf	&%) ·	+ .	% + <sup>&amp;</sup>	(%
MK 75 '	: Ua ]`mG\Y`HYf	) \$.	%\$ <sup>·</sup>	į.	*\$
	Total Capacity	712	58	197	967

#### GnoghYa Ci hWta Y 5VN(]Yj Ya Ybh+#%#% hc %&# %#%

A YUgi fY		GYa ]!Ubbi ປົ΄ ; cປົ΄	GYa ]!Ubbi U' 5 <b>Vhi</b> U'	5 <b>V</b> \( ]Yj YX <sup>.</sup>
<ci gy\c`xg`gyfj="" td="" yx`<=""><td>,</td><td>' +) \$<sup>··</sup></td><td>'++\$`</td><td>M/g<sup>·</sup></td></ci>	,	' +) \$ <sup>··</sup>	'++\$`	M/g <sup>·</sup>
Gi WWggZi `` <ci 'ci="" g]b[="" hwta="" td="" yg'<=""><td></td><td>%%%%</td><td>- &amp;- `</td><td>Bc'</td></ci>		%%%%	- &- `	Bc'
Gi WWggZi `` <ci 'ci="" g]b[="" lwta="" td="" yg'<=""><td>Ι'</td><td>' + '</td><td>' &amp; `</td><td>M/g<sup>-</sup></td></ci>	Ι'	' + '	' & `	M/g <sup>-</sup>
5j YfU[Y@Yb[h\cZGHUm	8Ung <sup>i</sup>	( & ·	(+.	Bc'
FYVJK]j ]ga ''	Ι.	O%\$ ·		M/g <sup>-</sup>

9a Yff YbWhG\Y`hYf GnophYa

<sup>%&</sup>lt;i W\_YVVfffm<ci gY Ya Yf[YbWrg\Y`hYf`VYXg`UfY YI WI XYX`Zfca 'h\]g`fYdcfh''

<sup>&</sup>amp; 7UdUV]/m]g ZYI ]V Y VUgYX cb bYYX"

<sup>&#</sup>x27; NA 75 UbX NK 75 dfcj JXYX cj YfZck Zcf h Y Zua ] mgnghYa Xi f]b[ : M&\$&\$" NA 75 dfcj JXYX cj YfZck Zcf h Y g]b[ Y UXi h gnghYa Xi f]b[ : M&\$&\$"



GnghYa DfYj Ybh]cb GnghYa

5[YbV]Yg.; `UXXYb'7ca a i b]Im<ci gYž<ca Y`Ygg: Ua ]`]Yg: ci bXUI]cbžUbX`

JcibhyyfgcZ5a Yf]WU

DYf]cX. +#%#% ! %## %#%

DYfZcfa UbW. ' <][\'

H\Y'dfYj Ybhjcb gnghYa ']g'Wa df]gYX'cZhk c'; `UXXYb'7ca a i b]hm<ci gY'ZJa ]'m\\ca Y`YggbYgg' dfYj Ybhjcb dfc[fUa zzf'dfY[bUbhk ca Yb'cdYfUhYX'Vm <a Y`Ygg: Ua ]]Yg: ci bXUhjcbz'UbX'U'\\ca Y`YggbYgg'dfYj Ybhjcb dfc[fUa zzf'j YhYfUbg' cdYfUhYX'VmJC5"'H\Y'JC5'GGJ: dfYj Ybhjcb dfc[fUa ghUfhYX']b'CVMcVYf'&\$% "'H\Y': fUb\_`]b' 7ci bhm7\]'XfYb'GYfj ]WYg; `UXXYb'7ca a i b]hm<ci gY'ZJa ]'m\\ca Y`YggbYgg'dfYj Ybhjcb dfc[fUa zzf'dfY[bUbh' k ca Yb'k Ug'UXXYX']b'3 m&\$\%"'H\Y'\\ca Y`YggbYgg'dfYj Ybhjcb'dfc[fUa zzf'dfY[bUbh' k ca Yb'k Ug'UXXYX']b'5df]''&\$\%"'

H\Y'dfYj Ybhjcb'dfc[fUa g'Ugg]ghZUa]']Yg'UbX']bX]j ]Xi U'g'Uh]a a ]bYbhf]g\_cZ`cg]b['h\Y]f' \ci g]b['"CbW'Y`][]V]']mn]g XYhYfa ]bYXž]bX]j ]Xi U'g'UbX'ghUZZXYj Y`cd'U'g\cfHhYfa 'UMlcb'd'Ub' hc'k cf\_hck UfXg'gYWf]b['cfa U]bHJ]b]b['dYfa UbYbh\ci g]b['"\p\X]j ]Xi U'g'fYWf]j Y'WlgY' a UbU[Ya YbhgYfj ]Wgza YX]Uh]cb gYfj ]Wgz\ci g]b['d'UWa YbhUgg]ghUbWzVi X[Yh Wti bgY`]b['z'UbX'Ugg]ghUbW'k ]h\ 'Udd']Wh]cbg'Zcf': fUb\_`]b '7ci bhm8YdUfha YbhcZ\cV'UbX': Ua ]'mGYfj ]Wg'GhUZZU'gc Ugg]ghg']bX]j ]Xi U'g']b 'UWVgg]b['ch\Yf'dcgg]V'Y'gci fWg'Zcf' Z]bUbWJU 'Ugg]ghUbW' UbX'ch\Yf'Wta a i b]mhVUgYX'gYfj ]Wg'hc'\Y'd a U]bHJ]b'h\Y]f'\ci g]b['" H\YgY']bWi XY'@Y[U'5]Xz7CA D5GGz+A D57Hz\ci+\z\-\B\zUbX'H\Y'GU'j Uh]cb'5fa n''Hc'UW\ta d`]g\h\]h\]gzWUgY'a UbU[Yfg'Ugg]gh]bX]j ]Xi U'g'UbX'ZUa]']Yg'k ]h\ 'Z[bX]b['gi ]hUV'Y'UbX'UZcfXUV'Y'\ci g]b['UbX'`]b\_]b['h\Ya 'hc'766'UXa]b]ghYfYX'8]fYV\n'7`]Ybh5gg]ghUbW'''7UgY'a UbU[Ya YbhgYfj ]Wg'Wbh]bi Yi bh]'h\Y'\ci gY\c'X\Ug'Uw\]Yj YX'U'gi WWggZ ``\ci g]b['ci h\xta Y'f]''Y'z' gi Z[V]Ybh\ci gY\c'X']b\xta Y']g'Uj U]'UV'Y'hc'UZcfX'\ci g]b['EUbX']g'']b\_YX'k]h\ 'gi ddcfh]j Y'gYfj ]Wg']b'h\Y'\xta a i b]m''

Gnothya Ci hwta Y 5 W Yi Ya Ybh + #%#% hc %&# %#%

A YUgi fY		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!Ubbi U' 5WhiU'	5 <b>W</b> (]Yj YX
BYk ' <ci gy\c`xg'gyfj="" th="" yx'<=""><th></th><th>%+( ·</th><th>% * '</th><th>M/g<sup>·</sup></th></ci>		%+( ·	% * '	M/g <sup>·</sup>
<ci gy\c`xg'gyfj="" td="" yx'<=""><td></td><td>&amp;*' ·</td><td>' %* '</td><td>M/g<sup>·</sup></td></ci>		&*' ·	' %* '	M/g <sup>·</sup>
91 ]h/X ' <ci gy\c`xg%'<="" td=""><td></td><td>% - '</td><td>&amp;&amp;,</td><td>B#5<sup>-</sup></td></ci>		% - '	&&,	B#5 <sup>-</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg''<=""><td></td><td>%* \$ ·</td><td>&amp;\$( ·</td><td>M/g<sup>·</sup></td></ci>		%* \$ ·	&\$( ·	M/g <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg''<=""><td>1 .</td><td>, ) .</td><td>, - '</td><td>M/g<sup>·</sup></td></ci>	1 .	, ) .	, - '	M/g <sup>·</sup>
5j YfU[Y@Yb[h\cZDUfh]V]dUh]cb	8Ungi <sup>.</sup>	%) \$	%\$) ·	M/g <sup>·</sup>
FYVJK]j ]ga '	1 .	%\$ ·	% .	M/g <sup>·</sup>

-

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX""

#### : M&\$&\$ Dfc[fUa '9j U'i Uh]cb

GnghYa. FUd]X FY!\ci g]b[ GnghYa

5[YbVNyg. <a Y'Ygg': Ua j']yg': ci bXUh]cbž@ h\YfUb GcVNU GYfj ]WygžH\Y'

GU'i Uhicb 5fa nžijc'i bh/Yfg'cZ5a YfjWJžUbX'MA 75'

DYf]cX. +#%% ! %%# %#%

DYfZcfa UbW.··· <][\

HNYFUd]XFY!\ci g]b[ 'gnghya ']g'Wta df]gYX'cZ<ca Y'Ygg: Ua ]']Yg: ci bXUh]cb FUd]XFY!\ci g]b[ zJC5FUd]XFY!\ci g]b[ zHNYGU'j Uh]cb 5fa mFUd]XFY!\ci g]b[ zUbX'HNYGU'j Uh]cb 5fa mEV&<ci g]b[ 'dfc[ fUa g"GHUfh]b[ 'CWtcVYf'&\$% z@GG'Gi ddcfh]j Y'GYfj ]Wyg ZcfJYhYfUb : Ua ]']Yg'fGGJ: ŁUbX'JC5'GGJ: FUd]XFY!\ci g]b[ 'dfc[ fUa g'k YfY']bWi XYX']b'hXYgnghYa "HNY' NA 75'FUd]XFY!\ci g]b[ 'dfc[ fUa 'k Ug'UXXYX'hc'hXYgnghYa 'bi a VYfg'ghUfh]b[ 'si `m%z'&\$%+"'5' fUd]XfY!\ci g]b[ 'dfc[ fUa 'Zcf'nci hX'\ci gY\c`Xg'UXa ]b]ghYfYX'Vm<ca Y'Ygg: Ua ]']Yg': ci bXUh]cb'UbX'U'fUd]XfY!\ci g]b[ 'dfc[ fUa 'ZcWyg]b[ 'cb'j ]Wh]a g'cZXca Ygh]Wj ]c`YbW' UXa ]b]ghYfYX'Vm\A 75'k YfY'UXXYX']b'si `m&\$&\$""+b'UXX]h]cbz'<ca Yz ```ghUfhYX'U'bYk fUd]X' fY!\ci g]b[ 'dfc[ fUa 'Zcf'g]b[ 'Y'UXi 'hg'ZcWygX'cb'a Yb'Ug'cZ'>Ubi Ufm%z'&\$&\$""

Fud]XFY!\ci g]b[ 'dfc[fua g'Ugg]gh]bX]j ]Xi U'g'UbX'ZJa ]]Yg'ghJn]b[ ']b Ya Yf[YbWng\Y'hYfg' k]h\ cVhJ]b]b[ 'UbX'a U]bhJ]b]b[ 'dYfa UbYbh\ci g]b[ "H\Y Ya Yf[YbWng\Y'hYfg' UggYgg'UbX' fYZYf'\ci gY\c'Xg'k\c fYei ]fY hfUbg]h]cbU' gi ddcfhhc ghJV]]nY \ci g]b[ 'UZhYf'Yl ]h]b[ 'h\Y' g\Y'hYf"Gi ddcfh]j Y'gYfj ]Wg'UfY ]b]hJUhYX'k\]Y'h\Y'\ci gY\c'X']g'gh]`` ]b g\Y'hYfg'UbX'UfY' ]bhYbXYX hc' Ugg]gh\ci gY\c'Xg']b `cWlh]b[ 'dYfa UbYbhz'UZzcfXUV'Y'\ci g]b[ ']b'U' Yfmg\cfhh]a Y' cZfYZYffU' Zfca 'h\Y'Ya Yf[YbWng\Y'hYf"'Hc'UWna d`]g\ 'h\]gz'WgY'a UbU[Yfg'Ugg]gh\ci gY\c'Xg'k]h\ Z]bX]b[ 'gi ]hUV'Y'UbX'UZzcfXUV'Y'\ci g]b[ 'UbX``]b\_]b[ 'h\Ya 'hc' 7G6' UXa ]b]ghYfYX'X]fYVnWyYbhUgg]ghUbW' f875½"7UgY'a UbU[Ya YbhgYfj ]Wg'Wcbh]bi Y'i bh]`'h\Y\ci gY\c'X'\Ug'UW\]Yj YX'U'gi WwYggZi ``\ci g]b[ 'ci hWa Y'f]"Y"z'gi ZZ]W]Ybh\ci gY\c'X']bWa Y']g' Uj'UV'Y hc' UZzcfX'\ci g]b[ ŁUbX``]b\_U[Y'k]h\ gi ddcfh]j Y'gYfj ]Wg']b'h\Y'Wa a i b]hmcWW fg" H\Y'dfc[fUa g'dfcj]XY'g\cfhlYfa 'gYfj]Wg'hnd]WU``mzcf'' 'hc'\* a cbh\g'UzhYf'\ci g]b[ 'd'UWna Ybh''

GnothYa Ci hWta Y 5WN]Yi Ya Ybh + #%#% hc %&#' %#% '

A YUgi fY		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!Ubbi ປ΄ 5 <b>Vhi</b> ປ΄	5 <b>VN</b> ]Yj YX <sup>.</sup>
BYk ' <ci gy\c`xg'gyfj="" td="" yx'<=""><td></td><td>- \$\$.</td><td>- ( - ˙</td><td>M/g<sup>·</sup></td></ci>		- \$\$.	- ( - ˙	M/g <sup>·</sup>
<ci gy\c`xg'gyfj="" td="" yx'<=""><td></td><td>%()\$</td><td>%) * + .</td><td>M/g<sup>·</sup></td></ci>		%()\$	%) * + .	M/g <sup>·</sup>
9I]hYX' <ci gy\c`xg%'<="" td=""><td></td><td>- \$\$.</td><td>- ( ' '</td><td>B#5<sup>-</sup></td></ci>		- \$\$.	- ( ' '	B#5 <sup>-</sup>
Gi WWggZi`` <ci g]b['ci="" lwta="" td="" yg''<=""><td></td><td>)(\$</td><td>)+) ·</td><td>M/g<sup>·</sup></td></ci>		)(\$	)+) ·	M/g <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" lwta="" td="" yg''<=""><td>1</td><td>* \$ .</td><td>* %</td><td>M/g<sup>·</sup></td></ci>	1	* \$ .	* %	M/g <sup>·</sup>
5j YfU[Y`@Yb[th\`cZG\Y`tYf`GtUn*	8Ungi	1.1.4	(\$'	Bc <sup>·</sup>
5j YfU[Y`@Yb[h\`cZDUfh]V]dUh]cb`	8Ung	%\$\$ <sup>.</sup>	%\$% <sup>:</sup>	M/g <sup>·</sup>
FYV <b>JX]j</b> ]ga	Ι.	O%\$ ·	% .	M/g <sup>·</sup>

<sup>%&#</sup>x27;A cb]hcfYXžVi hbchYj U'i UhYX'''

& %\$\* \(\cigY\c`Xg`k YfY`YI WI XYX`Zfca '5@CG`a YUgi fY`Zcf`bch\Uj ]b[ 'cj Yf`Udd]b[ 'Ya Yf[ YbWrig\Y`hYf`dfc[ fUa g`cf`Zcf`gh]```fYg]X]b[ ]b Ya Yf[ YbWrig\Y`hYf`Uhh\Y`h]a Y`cZh\Y`fYdcfft'



GnghYa. DYfa UbYbhGi ddcfh]j Y < ci g]b[ GnghYa

5[YbVNyg." 5) ]g#5a Yh\nghž ≠bV1ž9ei ]hUg <YUh\ž7ca a i b]hm<ci g]b[BYhk cf\_ž

A Ufm\Uj YbzBUhcbU`7\i fW\FYqIXYbWqzJc\i bhYYfqcZ5a YfJWbz

MA 75žUbX MK 75

DYfcX. +#%#% ! %&# %#%

DYfZcfa UbW." < ][\"

Dyfa UbYbhGi ddcfhjj Y'<ci g]b['flDG<\E']b\_g'fYg]XYbhg'hc U'fUb[Y'cZgi ddcfhgYfj]Wg' XYg][bYX'hc a U]bHJ]b gHJV'Y'\ci g]b['UbX']a dfcj Y'h\Y'ei U']hmcZh\Y]f'']j Yg''\D'7c'i a Vi g'UbX': fUb\_`]b'7ci bhmžDG< Zcf'dYfgcbg'k\c'\Uj Y'Yl dYf]YbWX'Wfcb]Wcf'`cb[!hYfa \ca Y'YggbYgg'UbX'UfY'X]gUV'YX'Wbg]ghg'cZ%' '\* i b]hg'cZ\ci g]b['cdYfUh]b['k]h\]b''(X]ZZYfYbhgi ddcfhjj Y'\ci g]b['dfc[fUa gžd'i g'Ub UXX]hJcbU'' \*('i b]hg'dfcj]XYX'h\fci [\h\Y'J 5 J 5G<'dfc[fUa "'H\YgY'dfc[fUa g'fYdfYgYbhU'X]j YfgY'a ]l hi fY'cZ\ci g]b['UbX'gi ddcfhjj Y'gYfj]W'a cXY'g'XYg][bYX'hc VYgha YYhh\Y'bYYXg'cZ]bX]j ]Xi U'g'UbX'ZJa ]']Yg'UbX'hc dfca chY'`cb[!hYfa \ci g]b['ghJV]`]hm''

Gi ddcfhj Y'\ci gjb['dfc[fUa g'hnd]]WJ'`mi gY'U'Î V'YbXYX'a UbU[Ya Ybhi'a cXY``cZ\ci gjb['cdYfUh]cbg'UbX'gi ddcfhj Y'gYfj ]W'a UbU[Ya Ybh''' + b'h\]g'a cXY`ždfcdYfhma UbU[Ya Ybh'UbX'gYfj ]W'ghUZZV&cfX]bUhY'YZZcfhg'VY[]bb]b['k]h\"]b]h]U'i b]h`YUg]b['''H\]g'U'`ck g'Zcf'U'a cfY' Wta dfY\Ybg]j Y'j ]Yk 'cZfYg]XYbhg'UbX'h\Y]f'bYYXg'UbX'WcfX]bUh]cb']b'fYgdcbgY'hc''YUgY' Wta d`]UbW']ggi Yg''''

H\Y'gYfj ]Wg'cZYfYX'Vmgi ddcfh]j Y`\ci g]b[ 'dfcj ]XYfg'a UmVY'cb! cf'cZ!g]hY'UbX'j Ufm XYdYbX]b[ 'cb'h\Y'bYYXg'cZh\Y'fYg]XYbhg''GYfj ]Wg'a Um]bWl XY'UbmWta V]bUh]cb'cZh\Y'Zc``ck ]b[...

- 7UqY a UbU[Ya Ybh]
- < YU'h\ 'WfY'
- 9a d'cna YbhqYfj |WqžhfU]b]b[ žUbX'cV'd'UWa Ybh
- FYWtj YfmgYfj ]Wg UbX gi ddcfh[fci dg
- \$\langle \begin{align} \pm \pm \text{2} \\ \pm \pm \text{2} \\ \pm \text{2}

5``gi ddcfhjj Y`\ci gjb[ 'dfc[ fUa g'UX\YfY hc'h,Yî <ci gjb[ ': ]fgh' a cXY`]b'h,UhgYfj ]W' dUfhjVJdUhjcb']g' c'i bhUfmUbX ]g bchUfYei ]fYa YbhZcf cVhU]b]b[ 'cf'a U]bhU]b]b[ '\ci g]b[ "'' Jc'i bhUfmgYfj ]Wg Ybgi fY'h,Uh]bX]j ]Xi U'g'UbX ZJa ]`]Yg fYg]ghUbhhc gYfj ]W dUfhJVJdUhjcbzcf h\cgY k\c']bWbg]ghYbhmdUfhjVJdUhYžVWb a U]bhU]b h\Y]f'\ci g]b[ 'gc 'cb[ 'Ug'VUg]WYUgY Wa d']UbW ]g'UW,]Yj YX"Gi ddcfhjj Y`\ci g]b[ 'dfcj ]XYfg'hnd]W'`mghUfhYb[ U[ ]b[ 'fYg]XYbhg VYZcfY'a cj Y!]b 'Ug'dUfhcZh\Y'ci hfYUW, 'UbX'Udd`]Whjcb dfcWgg'UbX'fYdcfhih,Uhih\Y'j Ugh a U'cf]hmcZfYg]XYbhg'W\ccgY hc dUfhjVJdUhY']b gYfj ]Wg'cbW'ghUV'm\ci gYX"5``dYfa UbYbh gi ddcfhjj Y`\ci g]b[ 'dfc[ fUa g'dUfhjVJdUhY']b h\Y 'WbhfU']nYX'W]YbhfYZYffU'žUggYgga YbhžUbX'Y][ ]V]`]hmUgdYVMg'cZh\Y'I b]ZJYX'Gi ddcfhjj Y'\ci g]b[ 'GnghYa 'fl G<G'L'I G<G'df]cf]hjnYg'dYcd`Y'Yl dYf]YbVJb[ 'W\fcb]Wcf``cb[!hYfa '\ca Y`YggbYgg'UbX'k\c'\Uj Y'h\Y'a cghgYj YfY'gYfj ]W'bYYXg"

5b UXX]h]cbU`, \$`i b]hg`cZdYfa UbYbhgi ddcfh]j Y`\ci g]b[`Zcf`a Yb`UbX`k ca Yb`UfY`]b`j Uf]ci g`ghU[Yg`cZXYj Y`cda Ybh''±n]g`Ubh]V]dUhYX`h\Uhh\YgY`UXX]h]cbU`i b]hg`k]``VYVka Y`cdYfUh]cbU``]b`&\$&\$`UbX`VYncbX''

#### : M&\$&\$ Dfc[fUa '9j U'i Uh]cb

: M&\$&\$ DYfa UbYbhGi ddcfhjj Y'<ci gjb[ I bjhGi a a Ufm

5[YbW#Dfc[fUa	<ca y'ygg'<br="">I b]hg'</ca>	Ch\Yf' Dcdi `Uh]cbg'	ዙሪዘሆዝ b <b>]hg</b> ʻ	
5'j ]g#5a Yth\nghžGF5'UbX'HF5'	) &	j.	) & ·	
7ca a i b]lmikci g]lb[ 'BYlkkcf_ž6f][ [gXU'Y '5dUfha Ybhg'	&)	%\$ ·	') '	
7ca a i b]lmikci g]b[ BYlnkcf_ž6f][[gXUY =	(\$	j.	(\$	
7ca a i b]lmikci g]lb[ 'BYlnk cf_ž7UggUXm5j Ybi Y'	%\$ ·	İ.	%\$ ·	
7ca a i b]lmi <ci a="" b]lmi57h<ci="" bylk="" cf_ž7ca="" g]b[="" g]b[<="" i="" td=""><td>( &amp; '</td><td></td><td>( &amp; `</td></ci>	( & '		( & `	
7ca a i b]lmikci g]b[ ˈBYlnk cf_ž′9Ugh: ]Zh\ '5j Ybi Y'	1 1	İ.	1 ,	
7ca a i b]lmikci g]lb[ ˈBYlnk.cf_ž: Ua ] mikca Ygʻ	%\$ ·	Ţ.	%\$ ·	
7ca a i b]lmikci g]b[ 'BYlnk cf_ž ŧb[ 'Yk ccX'7ci fh'	()	%) .	* \$ '	
7ca a i b]lmkci g]b[ BYlkcf_ž@YUg]b[ Gi ddcfh]j Y <ci g]b[<="" td=""><td>&amp;) ·</td><td>İ.</td><td>&amp;) ·</td></ci>	&) ·	İ.	&) ·	
7ca a i b]lmikci g]b[ BYlk cf_žBcfl\ &&bX GlfYYh	' \$'	İ.	'\$'	
7ca a i b]lmikci g]lb[ BYlkkcf_žDUfgcbg 5j Ybi Y	&)	İ.	&) ·	
7ca a i b]lmkci g]b[ BYlkcf_žFYVi ]X]b[ @j Yg D57HHYUa ±b]ldUhj Y	, \$.	İ.	, \$	
7ca a i b]lmi <ci 5dufha="" <="" bylk="" cf_žguzy="" g]b[="" td="" uj="" yb="" ybhg<=""><td>% .</td><td>İ.</td><td>% .</td></ci>	% .	İ.	% .	
7ca a i b]lmikci g]lo[ 'BYlrk cf_žGci h\dc]lohD`UW'	(*.	'('	, \$	
7ca a i b]lmi≺ci g]lb[ ˈBYlrk cf_žGF 5 ·	<b>&amp;\$</b> , '	j.	&\$, ·	
7ca a i b]lmikci g]b[ 'BYlkcf_žHYffUW' 'D`UW'	(+	% .	* \$ '	
7ca a i b]lmi≺ci g]lb[ ˈBYłk cf_žH-5′	%+% <sup>-</sup>	Ţ,	%+% <sup>-</sup>	
7ca a i b]lmkci g]lb[ BYłk cf_žHF5 =#A Ufg\ 6fcc_ D`UW'	&\$ ·		&\$ ·	
7ca a i b]lmi≺ci g]lb[ ˈBYlrk cf_žK ] gcb ˈ		j.		
9ei ]hUgʻ <yuʻh\žhf5ʻ< td=""><td>, - '</td><td>j.</td><td>, - '</td></yuʻh\žhf5ʻ<>	, - '	j.	, - '	
A Ufm\Uj Ybž7ca a cbg'Uh7\Ublfm	) \$ .	) \$ .	%\$\$ <sup>.</sup>	
BUłjcbu 7\i fW FYgjXYbWgž7ca a cbg'Uh6i W_jb[\Ua	+) .	&) ·	%\$\$ <sup>.</sup>	
BUłjcbu`7\i fW.FYgjXYbWgž7ca a cbg'Uh; fUbh	) \$ .	) \$ .	%\$\$ <sup>.</sup>	
BUhjcbu`7\i fW.FYgjXYbWgž7ca a cbg'Uh@jj jb[ghcb%	* \$ `	(\$	%\$\$ <sup>.</sup>	
BUł]cbu`7\i fW.FYg]XYbWgž7ca a cbg'UhH\]fX'	* \$ `	(\$	%\$\$ <sup>.</sup>	
JYHYfUbgʻ5ZZJ]fgžJ5G<%	. *(,	Ţ,	' * ( '	
Jc'i bhYYfg'cZ5a Yf]Wlž: Ua ]'mGi ddcfh]j Y <ci g]b[<="" td=""><td>1</td><td>Ţ</td><td>1 .</td></ci>	1	Ţ	1 .	
Jc'i bHYYfg'cZ5a Yf]WlžJUb'6i fYb'J]``U[Y'	* \$ '	(\$'	%\$\$ <sup>.</sup>	
MA 75ž(\$"K"@cb['GhfYYhGi ddcfhjjY' <ci gjb['<="" td=""><td><b>%\$)</b></td><td>&amp;* \$</td><td>'*)</td></ci>	<b>%\$)</b>	&* \$	'*)	
MA 75'(\$'K Yghi@cb['GhfYYh'9 dUbg]cb'	1 1	·	1 .	
MA 75ž: fUb_`]b GrUrjcb	+) .	&) .	%\$\$ <sup>-</sup>	
MA 75ž:•gU]U\`Dfc^YVM	%* \$ ·	·	%* \$ ·	
NA 75žGWUHYfYX'G]HYg' <ca 9'<="" td=""><td>) \$ .</td><td>i.</td><td>) \$ .</td></ca>	) \$ .	i.	) \$ .	
MK 75ž′K <b>-</b> B; G <sup>·</sup>	- %	İ.	- %	
HcHU'I b]hg'	&ž \$\$°	* \$&`	&ž- \$&`	

<sup>%&</sup>quot;7UdUV][hmiXYX]WUhYX"hc"j YhYfUbg""



GnoghYa 'Ci hWta Y'5VN(]Yj Ya Ybh'+#%#% 'hc'%&# %#% %'

A YUgi fY		GYa ]!Ubbi ປົ ; cປົ	GYa]!UbbiU^ 5 <b>Vh</b> iU^	5 <b>W(]Yj</b> YX <sup>.</sup>
<ci gy\c`xg`gyfj="" td="" yx`<=""><td></td><td>&amp;% \$<sup>.</sup></td><td>% (%</td><td>M/g<sup>·</sup></td></ci>		&% \$ <sup>.</sup>	% (%	M/g <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td></td><td>% %+ '</td><td>%)-</td><td>M/g<sup>·</sup></td></ci>		% %+ '	%)-	M/g <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg&'<=""><td>Ι.</td><td>- \$</td><td>- + ·</td><td>M/g<sup>·</sup></td></ci>	Ι.	- \$	- + ·	M/g <sup>·</sup>
Gi WWggZi `` <ci '9 ="" ]hg&'<="" g]b[="" td=""><td>Ι.</td><td>) \$ .</td><td>(\$'</td><td>Bc<sup>·</sup></td></ci>	Ι.	) \$ .	(\$'	Bc <sup>·</sup>
<ci '5zzcfxuv]`]lmuh9l]h3<="" g]b[="" td=""><td>1 .</td><td>) \$ .</td><td>- + .</td><td>B#5<sup>-</sup></td></ci>	1 .	) \$ .	- + .	B#5 <sup>-</sup>
<ci 'ghuv]`]hm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>) %</td><td>M/g<sup>·</sup></td></ci>	A cbh\g	&( ·	) %	M/g <sup>·</sup>
91]hhc <ca td="" yyggbygg&<=""><td>Ι.</td><td>O%\$ ·</td><td>&amp;`</td><td>M/g<sup>·</sup></td></ca>	Ι.	O%\$ ·	&`	M/g <sup>·</sup>
Hi fbcj Yf'FUhY)	1 .	%\$ <sup>.</sup>	* '	B#5 <sup>-</sup>
GnghYa 'CWW/dUbWhFUhY'	1 .	-) ·	- &`	M/g <sup>·</sup>
<	18 cf 7c7	7°@cWU`; cU`g`		
BY[Un]jYFYUgcbZcf@YUj]b[&	1 '	&\$ <sup>·</sup>	- ·	M/g <sup>·</sup>
±bWfYUgY]bWgN]bWdaYftchNYfhNUbYad`cnaYbhLZfcaYbhfmhcYl]hcfYbXcZfYdcfh]b[dYf]cX&′(		- \$	(' '	<b>№</b> g <sup>·</sup>
±bWfYUgY]b]bWtaYZfcaYad`cmaYbhž ZfcaYbhfmhcYl]hcfYbXcZfYdcfh]b[ dYf]cX&⊄	1 .	%) .	- '	Bc <sup>·</sup>

<sup>(&</sup>quot;\$, "\cigY\c`Xg'k YfY`Yl Wi XYX`Zfca 'a YUgi fY`Xi Y`hc`W]Ybhg`fYg]X]b[`]b`h\Y`gnghYa "Ygg'h\Ub" \*) 'XUng'''
) 'A cb]hcfYX`Vi h'bchYj U'i UhYX'''

<ca Y`YggbYgg'DfYj Ybh]cb'</pre>



7UHY[cfm<ca Y`YggbYgg DfYj Ybh]cb</th>5[YbWn; `UXXYb 7ca a i b]lm<ci gY``</th>

Dfc[fUa.": Ua]mkca YYggbYgg DfYj Ybhjcb

DYflcX. +#%#% ! %&# %#%

DYfZcfa UbW." <][\"

; `UXXYb`7ca a i b]hm<ci gY`: Ua ]`m<ca Y`YggbYgg`DfYj Ybh]cb`ghUfhYX`zi `m%ž&\$%&"'H\Y` dfc[fUa `k Ug`Zi bXYX`VmH\Y`G]Ya Yf`: Ua ]`m ci bXUh]cb`UbX`h\Y`I b]hYX`K UmcZ7YbhfU``C\]c` h\fci [\`zi bY'' \$ž&\$% "``

H\Y'dfc[fUa 'dfcj]XYg'g\cftHYfa z`]bHYbg]j Y'WUgY'a UbU[Ya Ybh'UbX``]a]HYX'Z]bUbV]U` Ugg]gHUbW'hc'ZUa];]Yg'a cgh'Uhf]g\_cZ\ca Y`YggbYgg']b'U'Wc``UVcfUhjj Y'a UbbYf'hc'Ybgi fY' ZUa];]Yg'a U]bHU]b'dcg]hj YzgHUV'Y'\ci g]b[/a U]bHU]b'gHUV];]ImcZWk];XfYb']b'gWkcc`/\Uj Y' UWW'gg'hc'Wa a i b]m!NUgYX'fYgci fWg'UbX'gYfj]W'g'Ug'bYYXYX'hc'a U]bHU]b'\ci g]b[/UbX'Xc' bchYbHYf'h\Y'Ya Yf[YbWng\Y'hYf'gnghYa"''

Dfc[fUa Ci hWta Y 5Wk]Yj Ya Ybh+#%#% hc %&# %#% . <ca Y YggpbYgg DfYj Ybh]cb

A YUgi fY		GYa ]lUbbi Ư˙ ; cƯ˙	GYa]!UbbiU' 5 <b>Wi</b> U'	5 <b>W(]</b> Yj YX <sup>.</sup>
7Uffncj Yf' <ci gy\c`xg'gyfj="" td="" yx%'<=""><td>٠</td><td>) \$ .</td><td>+%</td><td>B#5<sup>-</sup></td></ci>	٠	) \$ .	+%	B#5 <sup>-</sup>
BYk ' <ci gy\c`xg'gyfj="" td="" yx'<=""><td>٠</td><td>%%&amp;<sup>·</sup></td><td>%+<sup>·</sup></td><td>M∕g<sup>·</sup></td></ci>	٠	%%& <sup>·</sup>	%+ <sup>·</sup>	M∕g <sup>·</sup>
<ci gy\c`xg'gyfj="" td="" yx'<=""><td>٠</td><td>%* &amp;<sup>·</sup></td><td>%+, ·</td><td>Ŋ<b>Y</b>g⁻</td></ci>	٠	%* & <sup>·</sup>	%+, ·	Ŋ <b>Y</b> g⁻
9I ]hYX' <ci gy\c`xg%'<="" td=""><td>٠</td><td>%\$+<sup>·</sup></td><td>%( &amp; `</td><td>B#5<sup>-</sup></td></ci>	٠	%\$+ <sup>·</sup>	%( & `	B#5 <sup>-</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>٠</td><td>- %</td><td><b>%</b>' ·</td><td>Ŋ<b>Y</b>g⁻</td></ci>	٠	- %	<b>%</b> ' ·	Ŋ <b>Y</b> g⁻
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>· </td><td>, ) .</td><td>, +</td><td>Ŋ<b>Y</b>g⁻</td></ci>	· 	, ) .	, +	Ŋ <b>Y</b> g⁻
5j YfU[Y'@Yb[th.cZDUft]V]dUt]cb'	8Ungi <sup>*</sup>	%\$ <sup>·</sup>	- %	Ŋ <b>Y</b> g⁻
FYVJX]j ]ga '	· 	O%\$ ·	% .	Bc <sup>·</sup>
I gU[Y'cZ7G6'8]fYVM7`]Ybh5gg]ghUbW4	· 	* \$ .	+*.	Ŋ <b>Y</b> g⁻
I gU[Y'cZ7G6'8]fYVM7`]Ybh5gg]ghUbW('	٧.	%%\$\$ <sup>.</sup>	%* ( \$ ·	M∕g <sup>·</sup>
<ci '5zzcfxuv]`]hmuh9l="" ]h⁄²<="" g]b[="" td=""><td>Ι,</td><td>) \$ .</td><td>* + .</td><td>B#5<sup>-</sup></td></ci>	Ι,	) \$ .	* + .	B#5 <sup>-</sup>
DUgg'Dfc[fUa '7YffjZJVVIrjcb'		DUgg Wfh]Z]Wh]cb	7ca d`]Ubhk ]h\ 7cbX]h]cbg	<b>№</b> gʻ

; `UXXYb 7ca a i b]hmkci gY`l : Ua ]`mkca Y`YggbYgg DfYj Ybh]cb

<sup>%</sup>A YUgi fY ]gʻa cb]hcfYXžVi hbchYj U'i UhYX/\ck Yj Yfzh\]gʻWlb ]a dUMich\Yfʻgi WWggʻa YUgi fYgʻi

<sup>&</sup>amp;<ci gY\c`Xg'h\Uh\Ux'U'gi WWggt\`\ci g]b['ci hWta Y'k]ñ\ci h875'Ugg]ghUbW'k YfY'YI Wi XYX'Zfca 'h\Y'W'W'\Uh]cb"'</p>
'%+\ci gY\c`Xg'k YfY'YI Wi XYX'Xi Y'hc``\$']bWta Y'UbX``\$'a cbh\`mfYbhUbX'i h]]h]Yg"%\ci gY\c`X'k Ug'YI Wi XYX'Xi Y'hc`
a ]qq|b['XUhU"'

<sup>(:</sup> i bX]b['Uj U]'UV]']hmU'ck g'Zcf'h\Y'Uj YfU[Y'875'Ua ci bhhc Yl WYX'h\Y'[cU'''

#### : M&\$&\$ Dfc[fUa '9j U'i Uh]cb

7UhY[cfm < ca Y`YggbYgg DfYj Ybh]cb 5[YbWh ; `UXXYb 7ca a i b]hm<ci gY

Dfc[fUa.:: fUb\_]b 7ci bhm7\]XfYb GYfj ]Wrg: Ua ]m<ca Y`YgqbYgg DfYj Ybh]cb

DYf]cX. +#%#% ! %&# %#%

DYfZcfa UbW.... A YX]i a

; `UXXYb`7ca a i b]lmkci gY: 77G: Ua ]`mkca Y`YggbYgg`DfYj Ybh]cb`dfc[fUa `]g`U`dfYj Ybh]cb`dfc[fUa `gYfj ]b[`ZUa]`]Yg`fYZYffYX`hc`h\Ya `Vm fUb\_`]b`7ci bhm7\]`XfYb`GYfj ]Wrg''`H\Y`dfc[fUa `ghUffYX`xi`m%z\*&\$%+"`

H.Y dfc[fUa dfcj]XYgg\cfHhYfa ži d hc Zci f a cbh\g cZ]bhYbg]j Y WlgY a UbU[Ya YbhUbX `]a ]hYX Z]bUbV]U` Ugg]ghUbW hZJa]`]Yg]b U Wt``UVcfUhjj Y a UbbYf hc Ybgi fY ZJa]`]Yg a U]bhU]b dcg]hji YžghUv'Y \ci g]b[/\Uj Y UWNgg hc Wta a i b]hn!vUgYX fYgci fWg UbX gYfj]]Wg Ug bYYXYX hc a U]bhU]b \ci g]b[/UbX Xc bchYbhYf h\Y Ya Yf[YbWhg\Y`hYf gnghYa": 77GNg [cU`]g`Zcf h\YgY ZJa]`]Yg hc bch\Uj Y hc \Uj Y Ub cdYb WlgY k]h\: 77G"

Dfc[fUa Ci hwta Y 5Wk]Yj Ya Ybh+#%#% hc %&# %#% . <ca Y YggpbYgg DfYj Ybh]cb

A YUgi fY		GYa ]!Ubbi ປົ΄ ; cປົ່	GYa]!UbbiU^ 5VMU	5 <b>W(]</b> Yj YX <sup>.</sup>
7Uffmcj Yf' <ci gy\c`xg'gyfj="" th="" yx%'<=""><th>٠</th><th>) .</th><th></th><th>B#5<sup>-</sup></th></ci>	٠	) .		B#5 <sup>-</sup>
BYk ' <ci gy\c`xg'gyfj="" td="" yx'<=""><td></td><td>(\$</td><td>&amp;) ·</td><td>Bc<sup>·</sup></td></ci>		(\$	&) ·	Bc <sup>·</sup>
<ci gy\c`xg`gyfj="" td="" yx`<=""><td></td><td>().</td><td>1.1.</td><td>Bc<sup>·</sup></td></ci>		().	1.1.	Bc <sup>·</sup>
9I ]hYX <ci gy\c`xg%<="" td=""><td>٠</td><td>(\$.</td><td>% .</td><td>B#5<sup>-</sup></td></ci>	٠	(\$.	% .	B#5 <sup>-</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>٠</td><td>'('</td><td>% .</td><td>Bc<sup>·</sup></td></ci>	٠	'('	% .	Bc <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>Ι,</td><td>, ) .</td><td>%\$\$<sup>.</sup></td><td>M∕g<sup>·</sup></td></ci>	Ι,	, ) .	%\$\$ <sup>.</sup>	M∕g <sup>·</sup>
5j YfU[Y`@Yb[h\`cZDUfh]V]dUh]cb`	8Umg <sup>r</sup>	%\$ <sup>.</sup>	, %	M∕g <sup>·</sup>
FYVJX]j]ga	Ι'	O%\$ ·		M∕g <sup>·</sup>
I gU[Y'cZ7G6'8]fYVVi7`]Ybh5gg]gHJbVVV&'	Ι,	, \$.	%\$\$ <sup>.</sup>	M∕g <sup>·</sup>
IgU[Y.cZ7G6.8]fYVVn7.]Ybh5gg]grUbVV(	٠.	%\$\$\$ <sup>.</sup>	%&* & <sup>.</sup>	M∕g <sup>·</sup>
<ci 5zzcfxuv]="" ]h<sup="" ]lmuh9l="" g]b[="">@</ci>	Ι.	) \$ .	*\$'	B#5 <sup>-</sup>
DUgg Dfc[fUa '7Yft]ZJVUh]cb'		DUgg Wfh] <b>Z</b> ]V <b>Uh</b> ]cb	7ca d`]Ubhk ]h\ 7cbX]h]cbg	M/g <sup>·</sup>

ˈˈ(ˈ\ciˈgY\cːXgˈk YfYːYl Wi XYXːXi Yːhcːˈ\$ˈ]bWta YːUbXːˈ\$ˈa cbh\mfYbhÜbXˈi h]]h]Yg"

; `UXXYb 7ca a i b]lm<ci gY l : 77G: Ua ] m<ca Y`YggbYgg DfYj Ybh]cb &&

<sup>%</sup> A YUgi fY ]g a cb]hcfYXžVi hbchYj U'i UhYX/\ck Yj Yfžh\]g VWb ]a dUWfich\Yf gi VWYgg a YUgi fYg"

<sup>&</sup>amp;<ci gY\c'Xg'h\Uh'\UX'U'gi WWggZ `\ci g]b['ci hWta Y'k]h\ci h875'Ugg]ghUbW'k YfY'YI Wi XYX'Zfca 'h\Y'WI'W' Uhjcb'''</p>

<sup>(:</sup> i bX]b[ 'Uj U] UV] ] m'U `ck g Zcf h\ Y 'Uj YfU[ Y 875 'Ua ci bhhc Yl WYX h\ Y [ cU'''

7UhY[cfm" <ca Y`YggbYgg DfYj Ybhjcb "

5[YbWn <ca YYgg: Ua ]]Yg: ci bXUhjcb

Dfc[fUa." Dfy[bUbhK ca Yb < ca Y`YqqbYqq Dfy; Ybhcb

DYfcX. +#%#%- '!'%&#' %#%-

DYfZcfa UbW." <11/.

<ca Y`Yqq: Ua ]`]Yq: ci bXUh]cb DfY[ bUbhK ca Yb <ca Y`YggbYgg DfYj Ybh]cb ]g U'bYk ` \ca Y`YqqbYqq`dfYj Ybhjcb`dfc[fUa 'HUf[Yhjb[ dfY[bUbhk ca Yb" H\Y dfc[fUa 'qhUfhYX 5df]`%\ze{z} &\$% "

HNY dfc[fUa dfcj]XYg a YX]i a !hYfa Ugg]qrUbWzUj YfU[]b[ % a cbh\qzcZ]bhYbq]j Y WgY a UbU[Ya YbhUbX~]a ]hYX Z|bUbV|JU~Ugq]gHUbWr]b U Wt~UVcfUhjj Y a UbbYf hc Ybgi fY Yl dYVIJUbh UbX bYk a ch\yfga U]bHJ]b dcg]hj YžghUV`Y`\ci q]b[/\Uj Y`\YU`h\m\VUV]Yg/\Uj Y`UVWYgg hc` We a i b]mtNUgYX fYgci fWg UbX gYfj ]Wg Ug bYYXYX hc a U]bHJb \ci g]b[ /UbX Xc bchYbhYf hky ya yff ybwngky hyf gnghya "'Hk]g glfuhyf milbhybxg hc uxxfygg hky 7]hmcz7c'i a vi g 7Y`YVfUHY`CbY`]b]h|Uh|i Y`hc`fYXi WY`VX]`X`]bZUbha cfHu`]hm|b`ci f`V|hm'i

#### Dfc[fUa Ci hwta Y 5Wk]Yj Ya Ybh+#%#% hc %&# %#% . <ca Y YggpbYgg DfYj Ybh]cb

A YUgi fY		GYa ]lUbbi Ư˙ ; cƯ˙	GYa]!Ubbi U` 5Whi U`	5 <b>W</b> (]Yj YX <sup>.</sup>
7Uffncj Yf' <ci gy\c`xg'gyfj="" th="" yx%'<=""><th>٠</th><th>&amp;\$ ·</th><th>%) .</th><th>B#5<sup>·</sup></th></ci>	٠	&\$ ·	%) .	B#5 <sup>·</sup>
BYk ' <ci gy\c`xg'gyfj="" td="" yx'<=""><td>٠</td><td>% .</td><td>&amp;' ·</td><td>M/g<sup>·</sup></td></ci>	٠	% .	&' ·	M/g <sup>·</sup>
<ci gy\c`xg'gyfj="" td="" yx'<=""><td>,</td><td>1</td><td>1 '</td><td>M/g<sup>·</sup></td></ci>	,	1	1 '	M/g <sup>·</sup>
9I ]h/X´ <ci gy\c`xg%`<="" td=""><td>,</td><td>%* ·</td><td>%( '</td><td>B#5<sup>·</sup></td></ci>	,	%* ·	%( '	B#5 <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>,</td><td>% .</td><td>%&amp;<sup>.</sup></td><td>M/g<sup>·</sup></td></ci>	,	% .	%& <sup>.</sup>	M/g <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>Ι.</td><td>, ) .</td><td>* '</td><td>M/g<sup>·</sup></td></ci>	Ι.	, ) .	* '	M/g <sup>·</sup>
5j YfU[Y'@Yb[h\'cZDUff]WJdUf]cb'	8Ungi <sup>*</sup>	' *) '	% \$ <sup>·</sup>	M/g <sup>·</sup>
FYVIjK]j ]ga '	Ι.	O%\$ ·	&) ·	Bc <sup>·</sup>
I gU[YcZ7G68]fYWn7]Ybh5gg]grUbW&	Ι.	* \$ '	, - '	M/g <sup>·</sup>
I gU[Y'cZ7G6'8]fYWri7`]Ybh5gg]grUbW'	٠.	')\$\$	' +' , '	M/g <sup>·</sup>
<ci 5zzcfxuv]]muh9l]h@<="" g]b[="" td=""><td>Ι.</td><td>) \$ .</td><td>+' '</td><td>B#5<sup>-</sup></td></ci>	Ι.	) \$ .	+' '	B#5 <sup>-</sup>
DUgg Dfc[fUa '7Yfh]Z]Wlh]cb'		DUgg WfhJZWhjcb	7ca d`]Ubhk ]h\ 7cbX]h]cbg	M/g <sup>·</sup>

ˈˈ%\ci gY\c X'k Ug YI WI XYX XI Y hc \* \$ ]bVka Y UbX \* \$ a cbh\ mfYbhŪbX i hj ]hjyg"

<sup>%&#</sup>x27;A YUgi fY']g'a cb]hcfYXžVi hbchYj U'i UhYX/\ckYj Yfžh\]g'Wb']a dUWhch\Yf'gi WWgg'a YUgi fYg''

<sup>&</sup>amp; <cigY\c`Xg`h\Uh\UX`U`gi WWggzi ``\ci g]b[`ci hWa Y`k]h\ci h875`Ugg]ghUbW`kYfY`Yl Wi XYX`zfca 'h\Y`W'W`Uh]cb"

#### : M&\$&\$ Dfc[fUa '9j Ui Uh]cb

**7Uh/[cfm** <ca Y`YggbYgg DfYj Ybh]cb

5[YbWn JcibhYfgcZ5aYf]WJC\]c/ \=bX]UbU

Dfc[fUa. GGJ: fGi ddcfh]j Y GYfj ]Wyg Zcf J YhYfUb: Ua ] ]YgL DfYj Ybh]cb%

DYflcX. +#%% ! %%# %#%

DYfZcfa UbW.... <][\

Cb CWcVff % & \$% žJci bhYfgcZ5a Yf]WifJC5EVY[Ub]a d'Ya Ybh]b[ h\YGGJ:
Dfc[fUa "H\Y]bhYbhcZh\]g ZYXYfU`mZ bXYX dfcYVh]g hc dfca chY\ci g]b[ ghUV]]miUa cb[
j Yfmck!]bWta Y JYhYfUb ZJa]]Yg k\c fYg]XY]b cf UfY hfUbg]h]cb]b[ hc dYfa UbYbh
\ci g]b[ "H\]g dfc[fUa 'HJf[Yhg JYhYfUbg'Uhf]g\_cZ`cg]b[ 'h\Y]fYl]gh]b[ \ci g]b[ "JYhYfUb
ZJa]]Yg UfY XYZ]bYX Ug Vch\ U g]b[ Yj YhYfUb UbX h\Yj YhYfUb UbX\]g#\Yf ZJa] ma Ya VYfg
k]h\ k\ca 'g#\YfYg]XYg"9UW JYhYfUb fYW]j Yg gYfj]Wg]bWi X]b[ žVi hbch`]a]hYX hc
ci hYYUW žWgY a UbU[ Ya Ybhž Ugg]ghUbW ]b cVhJ]b]b[ J5 VYbYZ]hgž UbX'hYa dcfUfmZ]bUbW[U
Ugg]ghUbW"H\Y XYZ]b]h]cb cZh\Y JYhYfUb jg VfcUX Zcfh\YgY dfc[fUa g"5j YhYfUb jg UbncbY
h\Uh\Ug gYfj YX UMjj Y`m]b h\Ya]]hUfnžbUj U žUJf gYfj JWžA YfWUbhA Uf]bYgcf'k Ug'UMjj UhYX
VmDfYg]XYbh]U`cfXYf UbX gYfj YX ]b Ubch\Yf gHUhY cf Wti bhfmk\]Y ]b h\Y BUh]cbU`; i UfX cf
F YgYfj Yg" H\fYY VUg]WY][ JV] mWf]hYf]cbg Zcf'h\Y dfc[fUa 'UfY %E[fcgg Ubbi U`\ci gY\c X
JbWta Y "Ygg'h\Ub')\$1 cZh\Y UfYU'a YX]Ub ]bWta Y Zcf'\ci gY\c X g]nY &EdYfa UbYbhm\ci gYX
Vi h]a a]bYbhmUhf]g\_cZ]hYfU`\ca Y`YggbYgg" Ebc ch\YffYgci fWg'cf'gCfJU' gi ddcfhg'UfY
WffYbhm]b d`UW""JC5]q'df]a Uf]`mqYfj ]b[ q]b[ Y`UXi 'hgz'Vi hU'qc qYfj Yq'ZJa] ]jYg"

#### Dfc[fUa 'Ci hWta Y 5Wk]Yj Ya Ybh+#%#% 'hc' %&# %#% . '<ca Y YggbYgg'DfYj Ybh]cb'

A YUgi fY		GYa ]lUbbi Ư˙ ; cƯ˙	GYa]!Ubbi U' 5 <b>Vh</b> i U'	5 <b>VN</b> ]Yj YX <sup>.</sup>
7Uffncj Yf' <ci gy\c`xg'gyfj="" td="" yx&'<=""><td></td><td>%( '</td><td>' + '</td><td>B#5<sup>-</sup></td></ci>		%( '	' + '	B#5 <sup>-</sup>
BYk ' <ci gy\c'xg'gyfj="" td="" yx'<=""><td></td><td>% .</td><td>' %'</td><td>M∕g<sup>·</sup></td></ci>		% .	' %'	M∕g <sup>·</sup>
<ci gy\c`xg'gyfj="" td="" yx'<=""><td></td><td>&amp;+ ·</td><td>* '</td><td>M∕g<sup>·</sup></td></ci>		&+ ·	* '	M∕g <sup>·</sup>
9I]hYX' <cigy\c`xg&'< td=""><td></td><td>% .</td><td>)( .</td><td>B#5<sup>-</sup></td></cigy\c`xg&'<>		% .	)( .	B#5 <sup>-</sup>
Gi WWggZi`` <ci g]b['ci="" lwta="" td="" yg'<=""><td>,</td><td>%%<sup>.</sup></td><td>) \$ .</td><td>M/g<sup>-</sup></td></ci>	,	%% <sup>.</sup>	) \$ .	M/g <sup>-</sup>
Gi WWggZi`` <ci g]b['ci="" lwta="" td="" yg'<=""><td>1</td><td>- \$</td><td>-1 -</td><td>M/g<sup>-</sup></td></ci>	1	- \$	-1 -	M/g <sup>-</sup>
5j YfU[Y`@Yb[h\`cZDUfh]V]dUh]cb`	8Ungi <sup>*</sup>	- \$	%( ·	Bc <sup>·</sup>
FYVJJX]j ]ga '	1	O%\$	%\$ <sup>.</sup>	M/g <sup>·</sup>
I gU[Y'cZGGJ: '8]fYVM7']Ybh' 5gg]ghUbW'	1 .	, \$	- * ·	M∕g <sup>·</sup>
DUgg Dfc[fUa '7Yfh]Z]Wh]cb'		DUgg WftjZWhjcb	7ca d`]Ubhk ]h\ 7cbX]h]cbg	M∕g <sup>·</sup>

% Dfc[fUa ]g bchZ bXYX Vm7G6"

JC5C=1 GGJ: DfYj Ybh]cb &(

<sup>&</sup>amp; A YUgi fY ]g a cb]rcfYXžVi hibchYj U`i UhYX/\ck Yj Yfžh\]g WUb ]a dUWich\Yf gi WWgg a YUgi fYg"

## 7ccfX]bUhYX'Dc]bhcZ5WVgg'

#### : M&\$&\$ Dfc[fUa '9j U'i Uh]cb

7UHY[cfm 9a Yf[YbWhG\Y`HYf!7ccfX]bUHYX`Dc]bhcZ5WWgg

5[YbWn ; `UXXYb 7ca a i b]mkci gY Dfc[fUa : UW!hc!ZJW : Ua ]m8]j Yfg]cb

DYf]cX. +#%#% ! %&# %#%

DYfZcfa UbW." <][\"

GHUffijb[ '>Ubi Ufm%2&\$%, ž7G6 gYdUfUhYX ZLW!hc!ZLW 'X]j Yfg]cb Zcf ZLJa ]`]Yg Zca 'h Y \ca Y`Ygg \ch]bY 'UbX 'UfY i bUV`Y hc VY \a Y`Ygg \ch]bY 'UbX 'UfY i bUV`Y hc VY \a YX]UhY`mX]j YfhYX 'UfY fYZYffYX 'VmBYh/WfY 5WW gg hc; `UXXYb 7ca a i b]hm<ci gY Zcf 'U ZLW!hc!ZLW ']bhYfj ]Yk ž]Zdcgg]V Y cb h Y gUa Y XUn'i : Ua ]`]Yg h Yb a YYhk ]h \U WWgYk cf\_Yf k \c \Y`dg h Ya "cWhY cdh]cbg h UhUj c]X h Y bYYX Zcf Ya Yf[ YbWng\Y`hYfžh\i g WfYUh]b[ 'U VYHhYf ci hWta Y Zcf Vch\ h Y ZLa ]`mUbX h Y g\Y`hYf gnghYa ""5Xa ]gg]cb hc h Y ZLa ]`mg\Y`hYf gnghYa cWV fg k \Yb bc ch Yf gUZY cdh]cb Yl ]ghg Zcf h Y ZLa ]`n'i"

#### Dfc[fUa Ci hwta Y 5Wk]Yj Ya Ybh+#%#% hc %&# %#% . 7Dc5

A YUgi fY		GYa ]lUbbi Ư΄ ; cƯ΄	GYa]!UbbiU' 5 <b>Vh</b> iU'	5 <b>W</b> (]Yj YX <sup>.</sup>
<ci gy\c`xg`gyfj="" td="" yx`<=""><td></td><td>% \$\$</td><td>%* \$\$<sup>.</sup></td><td>M/g<sup>-</sup></td></ci>		% \$\$	%* \$\$ <sup>.</sup>	M/g <sup>-</sup>
Gi WWggZi `8]j Yfg]cb'Ci Wta Y''	Ι.	')'	1 · ·	M/g <sup>-</sup>
Gi WWggZi ``8]j Yfg]cb'Ci Wta Y''		())	(*&	M/g <sup>-</sup>
8]j Yfg]cb FYVJX]j ]ga	Ι,	O%\$ ·	-	M/g <sup>-</sup>
DUgg Dfc[fUa 7Yfh]Z]WJh]cb		DUgg WfhjZjWhjcb	7ca d`]Ubh	M/g <sup>-</sup>

7UHY[cfm 9a Yf[YbVMG\Y'HYf!7ccfX]bUhYX Dc]bhcZ5WN/ggi

5 YbWn BYHWYY 5WYgg

**Dfc[fUa** . 7ccfX|bUhYX Dc|bhcZ5WVgq : Ua ]m7Dc5#<ca Y Ygq <ch]bY

DYflcX. +#%#% ! %&# %#%

DYfZcfa UbW." < ][\"

7G6 WebHUMYX ]b &\$%) k ]h\ < UbXgCb 7YbHU C\]c hc XY`]j Yf U'7ccfX]bUhYX Dc]bhcZ 5WMgg#< ca Y`Ygg < ch]bY Zcf ZJa ]`]Yg gYY\_]b[ Ya Yf[YbWhg\Y`hYf"H\Y`\ca Y`Ygg`\ch]bY`]g` cdYfUhYX VmBYHWlfY 5WMgg g]bW' si `m%ž &\$% "H\Y`[cU`g`cZh\Y`< ca Y`Ygg`< ch]bY`UfY hc fYXi W'h\Y bi a VYf cZZJa ]`]Yg h\UhUfY UXa ]hhYX hc h\Y`ZJa ]`mgnghYa 'h\fci [\ X]j Yfg]cb hc a cfY`Uddfcdf]UhY`W&a a i b]hmfYgci fWg`UbX`]a dfcj Y`h\Y`ZJa ]`]YgñYl dYf]YbW`UWMgg]b[ g\Y`hYf"H\Y`< ca Y`Ygg`< ch]bY`\Ug`VYYb`XYg][ bYX`Ug`U'Wl``WbhYf'k ]h\ [fYUhYf'Ya d\Ug]g`cb` dfYj YbhJcb`UbX`X]j Yfg]cb`YZCfhg": Ua ]`]YgʻgYY\_]b[ Ya Yf[YbWhg\Y`hYf]b]h]U`mUMMgg`h\Y` < ca Y`Ygg`< ch]bY`j ]U`h\Y`\* %(!&+(!+\$\$\$ d\cbY`bi a VYf`VY]b[`Ubgk YfYX`VmXYg][ bUhYX` < ca Y`Ygg`< ch]bY`ghUZ'`D\cbY``]bYg`UfY`Ubgk YfYX`VmBYhWlfY`&(`\ci fg`U`XUnžYj YfmXUmcZh\Y`mYUf''``

GhUfh]b[`>Ubi Ufm'%z`&\$% z̄: UW!hc!ZJW'X]j Yfg]cb k UgʻgYdUfUhYX`Zfca 'h\Y`\ca Y`Ygg`\ch]bY` UbX`]gʻcdYfUhYX`Vm``UXXYb`7ca a i b]hm<ci gY"``FYZYffU`hc`ZJW!hc!ZJW'X]j Yfg]cb`]gʻXcbY`VmBYhWlfY`]Zh\Y`\ca Y`Ygg`\ch]bY`ghUZZ]g`bchUV`Y`hc`gi WWggZ```mX]j Yfhh\Y`ZJa]`m'``

#### <u>DYf7cfa UbW'Ci HWta Yg'</u> Dfc[fUa 'Ci HWta Y'5Wl]Yj Ya Ybh+#%#% 'hc'%&# %#% .'7Dc5'

A YUgi fY		GYa ]!Ubbi U` ; cU`	GYa]!Ubbi U' 5 <b>Vh</b> i U'	5 <b>W(]Yj</b> YX <sup>.</sup>
<ci gy\c`xg`gyfj="" td="" yx`<=""><td>٠,</td><td>%) \$\$.</td><td>% '</td><td>M∕g<sup>·</sup></td></ci>	٠,	%) \$\$.	% '	M∕g <sup>·</sup>
Gi WWggZi ``8]j Yfg]cb Ci H/kta Y ''	1	'\$	&- ·	M∕g <sup>·</sup>
Gi WWggZi ``8]j Yfg]cb Ci H/kta Y ''	٠,	()\$	* 1 * '	M∕g <sup>·</sup>
5j YfU[Y'K U]hHa Y'	A ]b	O) ·	1.(,	M∕g <sup>·</sup>
8]j Yfg]cb FYVJX]j ]ga	1	O%\$ ·	&\$ ·	Bc <sup>·</sup>
DUgg Dfc[fUa '7Yfh]Z]WJh]cb'	·	DUgg Wfh]Z]Wh]cb	7ca d`]Ubhk ]h\ 7cbX]h]cbg	M/g <sup>·</sup>

BYMWfYi: Ua]m7Dc5

#### : M&\$&\$ Dfc[fUa '9j U'i Uhjcb'

7UHY[cfm 9a Yf[YbWhG\Y`HYf!7ccfX]bUHYX`Dc]bhcZ5WWgg

5 YbWn BYHWYY 5WYgg

**Dfc[fUa**. 7ccfX]bUhYX Dc]bhcZ5WWgg G]b[ Y 5Xi h7Dc5#<ca YYgg <ch]bY

DYf]cX. +#%#% ! %&# %#%

DYfZcfa UbW... A YX]i a

7G6 WtblfUMYX ]b &\$\%& k ]h < UbXgCb 7YblfU C\]c hc XY ]j Yf U 7ccfX]bUhYX Dc]bhcZ 5WN gg#< ca Y Ygg < ch]bY Zcf g]b[ Y UXi hg gYY\_]b[ Ya Yf[ YbWng\Y hYf" H\ Y \ca Y Ygg \ch]bY Zcf g]b[ Y UXi hg gYY\_]b[ Ya Yf[ YbWng\Y hYf" H\ Y \ca Y Ygg \ch]bY UfY hc fyXi W h\ Y bi a VYf cZg]b[ Y UXi hg h\ UhUfY UXa ]hhYX hc h\ Y UXi hgnghYa h\ fci [ \ X]j Yfg]cb hc a cfY Uddfcdf]UhY Wta a i b]hmfYgci fWg UbX ]a dfcj Y h\ Y g]b[ Y UXi hg\N I dYf]YbW' UWN gg]b[ g\ Y hYf" 5Xa ]gg]cb hc h\ Y UXi hg\Y hYf gnghYa cW\V fg k \ Yb bc ch\ Yf cdh]cb Yl ]ghg Zcf h\ Y ]bX]j ]Xi U" H\ Y < ca Y Ygg < ch]bY \ Ug VYYb XYg][ bYX Ug U W\ WbhYf k ]h\ [ fYUhYf Ya d\ Ug]g cb dfYj Ybh]cb UbX X]j Yfg]cb YZcfhg" \ \$X]j ]Xi U g gYY\_]b[ Ya Yf[ YbWng\Y hYf]b]h]U m UWN gg h\ Y < ca Y Ygg < ch]bY j ]Uh\ Y \* \( (!&+(!+\$\$\$ d\cbY bi a VYf VY]b[ Ubgk YfYX Vm XYg][ bUhYX < ca Y Ygg < ch]bY ghUZ' D\cbY `]bYg UfY Ubgk YfYX VmBYhWlfY &( \ ci fg U XUnž Yj YfmXUmcZh\ Y nYUf" ``

#### Dfc[fUa Ci hwta Y 5Wk]Yj Ya Ybh+#%#% hc %&# %#% . 7Dc5

A YUgi fY <sup>.</sup>		GYa ]!Ubbi Ư΄ ; cƯ΄	GYa]!UbbiU' 5 <b>Vh</b> iU'	5 <b>W</b> ]Yj YX <sup>.</sup>
<ci gy\c`xg`gyfj="" td="" yx`<=""><td></td><td>() \$\$</td><td>(-, *.</td><td>M∕g<sup>·</sup></td></ci>		() \$\$	(-, *.	M∕g <sup>·</sup>
Gi WWggZi ``8]j Yfg]cb Ci lWta Y''	Ι,	&) ·	% .	Bc <sup>·</sup>
Gi WWggZi ``8]j Yfg]cb Ci lWta Y''		%%) ·	%' ' ·	M∕g <sup>·</sup>
5j YfU[Y'K U]hH]a Y'	A ]b	O) ·	1.(,	M/g <sup>·</sup>
8]j Yfg]cb FYVJX]j ]ga	Ι,	O%\$ ·	&, .	Bc <sup>·</sup>
DUgg Dfc[fUa '7Yfh]Z]Wlh]cb'		DUgg Wft]Z]Wlt]cb	7ca d`]Ubhk ]h\ 7cbX]h]cbg	M/g <sup>·</sup>



7UHY[cfm 9a Yf[YbWhG\Y`HYf!7ccfX]bUHYX`Dc]bhcZ5WWgg

5[YbWn <i W\_YVYffm<ci gY

**Dfc[fUa**. 7ccfX]bUhYX:5WWgg:UbX:FUd]X:FYgc`i h]cb

DYf[cX. +#%#% ! %## %#%

DYfZcfa UbW. ... B#5%

GHJff]b[ 'ai `nflez & \$% z < i W\_YVYffm < ci gY ]g UXa ]b]ghYf]b[ 'U'WcfX]bUhYX UWWgg dfc[ fUa `gdYV]Z]WU`mHJf[ Yh]b[ 'HUbg]h]cb U[ Y nci h\z % !&( 'nYUfg c Z U[ Yzi g]b[ '< I 8 Nci h\ < a Y`YggbYgg 8Ya cbghfUh]cb Dfc[ fUa 'flw 8DŁZ bXg" Nci h\ VYWca Y`Ybfc``YX ]b h\Y dfc[ fUa 'h\fci [ \ ZJWY!hc!ZJWY WcbhJWhUhh\Y < i W\_`YVYffm < ci gY cdYfUhYX NcD G\cd" DJff]W]dUbhg fYW]j Y`WgY a UbU[ Ya YbhgYfj ]W 'UbX UfY WcbbYWhYX hc fUd]X fY!\ci g]b[ z g\Y`hYfzcf Uddfcdf]UhY Wca a i b]hmfYgci fWg"

#### Dfc[fUa 'Ci hwta Y'5Wk]Yj Ya Ybh+#%#% 'hc'%&# %#% . '7Dc5'

A YUgi fY		GYa ]lUbbi Ư΄ ; cƯ΄	GYa]!Ubbi U' 5 <b>Vh</b> i U'	5 <b>\%</b> ]Yj YX <sup>.</sup>
<ci gy\c`xg`gyfj="" td="" yx`<=""><td></td><td>B#5<sup>-</sup></td><td></td><td>B#5<sup>-</sup></td></ci>		B#5 <sup>-</sup>		B#5 <sup>-</sup>
Gi WWggZi ``8]j Yfg]cb'Ci HWta Y''	Ι.	&) ·	%% <sup>.</sup>	Bc <sup>·</sup>
Gi WWggZi ``8]j Yfg]cb Ci HWta Y ''	٠,	\$.	( .	B#5 <sup>-</sup>
Gi WWggZi `FYZYffU'hc' FYgci fWg'	1 .	B#5 <sup>-</sup>	B#5 <sup>-</sup>	B#5 <sup>·</sup>
5j YfU[Y@Yb[h\cZ DUff]VJdUh]cb	8Ungi	B#5	+\$.	B#5 <sup>·</sup>
8]j Yfg]cb FYVJX]j ]ga	Ι.	O%\$ ·	B#5 <sup>-</sup>	B#5 <sup>-</sup>
DUgg Dfc[fUa 7Yfh]Z]Wh]cb		B#5 <sup>-</sup>	B#5 <sup>-</sup>	B#5 <sup>-</sup>

\_

<sup>%&</sup>quot;Dfc[fUa 'hcc'bYk 'hc'VY'Yj U'i UhYX"""

# 9a Yf[YbVk/G\Y`hYfg

: Ua ]`m'G\Y`hYfg'

#### : M&\$&\$ Dfc[fUa 9jUiUh]cb

7UhY[cfm] 9a Yff YbWmG\Y`hYffl Ua 1`]Yok

5[YbWm M 75 cZ7YbffU C\lc Dfc[fUa." JUb 6i fYb : Ua ]mG\Y`hYf

DYfcX. +#%#%- '!'%&#' %#%-

DYfZcfa UbW." A YXIi a

H.Y: Ua ] m9a Yf[YbWmG\Y`hYfUhJUb'6i fYb]gcdYfUhYXVmh\Y`MA 75cZ7YblfU`C\]c"H\Y` Vi ]X]b[ \Ug WdUM|mmc g\Y hYf U a ]b]a i a cZ\* ( ZJa ] Yg ]b df]j UhY fcca g UbX VY[ Ub cdYfUhlb[ ]b GYdhYa VYf &\$%) "5XX]h|cbU qdUW ]g Uj U] UV Y Zcf cj YfZck dfcj ]q]cb k \Yb h\Y ZII YX WUdUVIImija Zi ``mi hi`]nYX" MA 75 cZ7YbhfU C\]c Ugq]ghg \ca Y Ygg ZUa ] ]Yg k ]h\ VUg]W q\Y`HYFqYfj |WYqUbX`|b a YYHb[ H\Y]f`\ci q]b[ bYYXqžUq'H\Y qYV&bX`ZUa |`mYa Yf[YbWhq\Y`HYF jb 7cia Vigʻubx: fub ib 7cibm"H\YʻqYfjjWqjbWiXYʻquZYʻubxXYWbhq\YiHYfž\ciqjb[' d'UM'a Ybhž\ci g]b[ 'UXi cWWhžihfUbgdcfhUh]cb gYfj ]WygžUbX``]b\_U[ Yg hc ch\Yf Wta a i b]hm ayfi Mazua byyxyxzai W. Uaya a'cna Ybhubx Vybyzlhazubx d\naj\w'ubx vy\ui icfu' \YU'h\Wufy"Gca Y`cZh\Y`ch\Yf`Z bWflcbg`cZh\Y`g\Y`hYf`UfY`hc`WcbXi Wfi]bhU\_Y`UbX` UggYgga YbhUbX hc a U Y fYZYffU'g hc fUd]X fY!\ci g]b[ dfc[fUa g"H\fci [\ UdUffbYfg\]d k ]h\ 7c'i a Vi g'7]hmGWkcc'gžWk] XfYb fYWY]j Y Ugq]ghUbWrk ]hk Ybgi f]b[ i b]bhYffi dhYX YXi WUh]cb' Xi f]b[ 'h\Y'qW\cc`'mYUf'UbX'UWYqq]b[ 'Uddfcdf]UhY'XYj Y`cda YbHJ`'UbX'YXi WUhcbU`'qi ddcfhq''' 5Zh/fUg\cfnghUnžZUa]`]YgUhh\YJUb6ifYb:Ua]`mG\Y`h/facjY]bhcdYfaUbYbh\cig]b["

#### Dfc[fUa Ci hMa Y 5MX]Yj Ya Ybh+#%#% hc %&# %#% . 9a Yf[YbMhG\Y`hYf

A YUgi fY <sup>.</sup>	GYa ]!Ubbi Ư΄ ; cƯ΄	GYa]!Ubbi U' 5 <b>Vh</b> i U'	5 <b>W</b> (]Yj YX	
<ci gy\c`xg`gyfj="" td="" yx`<=""><td></td><td>')\$</td><td>)(, '</td><td>M/g<sup>·</sup></td></ci>		')\$	)(, '	M/g <sup>·</sup>
5j YfU[Y'@'b[th.'cZGtUm'	8Ungi	1 '	((.	Bc <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>٠,</td><td>&amp;\$\$<sup>*</sup></td><td>%).</td><td>M/g<sup>·</sup></td></ci>	٠,	&\$\$ <sup>*</sup>	%).	M/g <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>1 '</td><td>+\$.</td><td>1 '</td><td>Bc<sup>·</sup></td></ci>	1 '	+\$.	1 '	Bc <sup>·</sup>
I gU[Y'cZ7G6'8]fYVM7`]Ybh'5gg]gHJbWY'		) + .	۱ * ۱	Bc <sup>·</sup>
I gU[Y'cZ7G6'8]fYVM7`]Ybh'5gg]gHJbW%	Ι.	&\$ <sup>-</sup>	%% <sup>.</sup>	Bc <sup>·</sup>
A cj Ya Ybh	Ι.	%) .	( .	B#5 <sup>-</sup>
FYVIJX]j]ga	1 .	O%\$ ·	* '	M∕g <sup>·</sup>
DUgg Dfc[fUa '7Yfh]Z]Wh]cb'		DUgg WffjZWhjcb	7ca d`]Ubhk]h\ 7cbX]h]cbg	M∕g <sup>·</sup>

<sup>%′&</sup>lt;cigY\c`Xg`h\Uh`\UX`U`giWWgqZi``\cig]b[`cihWtaY`k]h\cihh\Y`Ugg]gHUbW`cZ875`kYfY`YlWlXYX`Zfca'h\Y`W'W`Uh]cb"` & A cb]hcfYXžVi hbchYj U`i UhYX"



7Uh/[cfm 9a Yf[YbVhrG\Y`hYf fl Ua]]]YgŁ

5[YbWh MK 75"

**Dfc[fUa**.": Ua ]m7YbhYf"

DYf]cX. +#\/#\% ! \%\#' \/\#\%

DYfZcfa UbW. ... @ck.

±b CVMcVYf &\$\$) hk Y MK 75 cdYbYX hk Y: Ua ] m7YbhYf hc fYd`UW hk Y Zcfa Yf < cgd]hU]hm 7YbhYf UbX bYhk cf\_cZcj Yfb][\hg\Y`hYf UW\capta a cXUh]cbg dfcj ]XYX Zcf ZUa ]:]Yg hk fci [\hkY ±bhYfZU]hk < cgd]hU]hm BYhk cf\_"Hk Y: Ua ] m7YbhYf \Ug WUdUM|mm cg\Y`hYf Ua ]b]a i a cZ) \$ ZUa ]:]Yg ]b df]j UhY fcca g"Hk Y gYfj ]Wyg ]bWi XY gUZY UbX XYW bhg\Y`hYfž\ci g]b[ d`UWa Ybhž\ci g]b[ 'UXj cVW\mathfubgdcfhUh]cb gYfj ]WygžUbX`]b\_U[ Yg hc ch\Yf Wta a i b]hmgYfj ]WygžUg bYYXYXžqi Wk Uq Ya d`cma YbhUbX VYbYZ|hqžUbX`d\mq]WU`UbX VY\Uj ]cfU`\YU`h\WbfY"`

5 j Uf]YhmcZUXX]h]cbU`cbg]hY`gi ddcfhjj Y`gYfj ]Wg`UfY`dfcj ]XYXž]bWi X]b[ 'Wk]`XVWfYžVWgY` a UbU[Ya Ybhž\ci g]b[ 'UbX`Ya d`cma YbhfYgci fWfgžUbX`Wk]`X`UXj cWWMhGca Y`cZh\Y`ch\Yf` Zi bWf]cbg`cZh\Y`g\Y`hYf`UfY`hc`WcbXi Wh]bhU\_Y`UbX`UggYgga YbhUbX`hc`a U\_Y`fYZYffU`g`hc` fUd]X`fY!\ci g]b[ 'dfc[fUa g"'H\fci [\`U'dUffbYfg\]d'k]h\`7c`i a Vi g`7]hmGWkcc`gžWk]`XfYb` fYW\*]j Y`Ugg]ghUbWi`k]h\`Ybgi f]b[ 'i b]bhYffi dhYX`YXi VWh]cb`Xi f]b[ 'h\Y`gWkcc`mYUf`UbX` UWW\*gg]b[ 'Uddfcdf]UhY`XYj Y`cda YbhU`UbX`YXi WhjcbU`gi ddcfhg"''5ZhYf`U'g\cfnghUnž\ZJa]`]Yg` ghUn]b[ 'Uhh\Y`: Ua]`m7YbhYf`a cj Y`]bhc`dYfa UbYbh\ci g]b[ "''

#### Dfc[fUa 'Ci h/vta Y'5VN]Yj Ya Ybh+#%#% 'hc'%&# %#% . '9a Yf]YbWhG\Y'hYf'

A YUgi fY		GYa ]lUbbi Ư˙ ; cƯ˙	GYa]!Ubbi U' 5 <b>Vh</b> i U'	5 <b>/\()</b> Yj YX
<ci gy\c`xg'gyfj="" td="" yx'<=""><td></td><td>')\$</td><td>&amp;*' '</td><td>Bc<sup>·</sup></td></ci>		')\$	&*' '	Bc <sup>·</sup>
5j YfU[Y'@Yb[th.'cZGtUm'	8Ungi	1 .	) %	Bc <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td></td><td>&amp;%\$<sup>·</sup></td><td>%\$, ·</td><td>Bc<sup>·</sup></td></ci>		&%\$ <sup>·</sup>	%\$, ·	Bc <sup>·</sup>
Gi WWggZi`` <ci 'ci="" g]b[="" hwta="" td="" yg'<=""><td>1</td><td>+\$.</td><td>)''</td><td>Bc<sup>·</sup></td></ci>	1	+\$.	)''	Bc <sup>·</sup>
I gU[Y'cZ7G6'8]fYVM7`]Ybh'5gg]ghUbW'		*\$	%* ·	Bc <sup>·</sup>
I gU[Y'cZ7G6'8]fYVM7`]Ybh'5gg]gHJbW%	1	&\$ <sup>·</sup>	%) .	NYg <sup>·</sup>
A cj Ya Ybh	Ι.	%) .	& <sup>.</sup>	B#5 <sup>-</sup>
FYVIJX]j ]ga ''	1	O%\$ ·	* '	M∕g <sup>·</sup>
DUgg Dfc[fUa '7Yff]ZJWUrjcb'		DUgg WffjZWhcb	7ca d`]Ubh	M∕g <sup>·</sup>

MK 751 : Ua ] m7YbhYf

<sup>%&</sup>lt;cigY\c`Xg'h\Uh\UX'U'gi WWggZi``\cig]b['cihWta Y'k]h\cihh\Y'Ugg]gHUbW'cZ875'kYfY'YIWIXYX'Zfca 'h\Y'WJ'W`Uh]cb'''
&'A cb]hcfYXžVi hbchYj U'i UhYX'''

# G]b[`Y'5Xi`\#\\th'G\Y\\fg'



7Uh/[cfm 9a Yf[YbWhG\Y`hYf`fl\di h\Ł

5[YbVm <i W\_YVYffm < ci gY Dfc[fUa . 9a Yf[YbVmG\Y'hYf\* DYf|cX. +#%#% ! %&# %#%

DYfZcfa UbW.... <][\

<i \( \frac{\text{V}}\text{YVYffm} < \ci gY \) g \( \frac{\text{J}}\text{Y} \) \( \frac{\text{Y}}\text{I} \) \( \frac{\text{V}}\text{YVYffm} < \ci gY \) \( \frac{\text{J}}\text{Y} \) \( \frac{\text{J}}\text{J} \) \( \frac{\text{J}}\text{J} \) \( \frac{\text{J}}\text{J} \) \( \frac{\text{J}}\text{J} \) \( \frac{\text{J}}\text{J} \)

Dfc[fUa 'Ci h/vta Y 5V/v]/j Ya Ybh+#%#% 'hc' %&# %#% . '9a Yf[YbWhG\Y`h/f'

A YUgi fY		GYa ]!Ubbi Ư΄ ; cƯ΄	GYa]!Ubbi ປົ΄ 5 <b>Vh</b> i ປົ່	5 <b>VN]</b> Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" td="" yx<=""><td>٠,</td><td>&amp;\$\$<sup>*</sup></td><td>&amp;&amp;\$<sup>·</sup></td><td>M∕g<sup>·</sup></td></ci>	٠,	&\$\$ <sup>*</sup>	&&\$ <sup>·</sup>	M∕g <sup>·</sup>
5j YfU[Y`@Yb[h\`cZGhUm`	8Ungi	<b>%\$</b> .		M∕g <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>٠,</td><td>%) &amp; .</td><td>%).</td><td>M∕g<sup>·</sup></td></ci>	٠,	%) & .	%).	M∕g <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>Ι.</td><td>, \$</td><td>- \$ .</td><td>M∕g<sup>·</sup></td></ci>	Ι.	, \$	- \$ .	M∕g <sup>·</sup>
CWM/dUbWmFUhY	Ι.	-) ·	*1 '	M∕g ·
A cj Ya Ybl⁴	Τ.	%) .	\$.	B#5 <sup>-</sup>
FYV][X]j ]ga ''	Ι.	O%\$ .	+ .	M/g <sup>·</sup>
DUgg Dfc[fUa '7Yfh]Z]WUh]cb'		DUgg Wfh]Z]Wh]cb	7ca d`]Ubh	M/g <sup>-</sup>

.

<sup>%</sup>Dfc[fUa ]gibchZ bXYX:Vm7G6": &A cb]hcfYXžVi hbchYj Ui UhYX":

<sup>&#</sup>x27;Dfc[fUa gYfj YX'U``nci h\ ]b bYYX'cZg\Y`hYf

# : M&\$&\$ Dfc[fUa 9jUiUh]cb

7UhY[cfm 9a Yf[YbWmG\Y`nYf'fG]b[`Y'5Xi `hop!'

5[YbWm @ h\YfUb GcVJU GYfj JWg

Dfc[fUa. : U]h\ A ]ga]cb cb; fUbhž, h\ 5j Ybi YžBUbWnn D`UW

+#%#%- '! '%&#' %#%-DYfcX.

DYfZcfa UbW.... <11/

: U]h\ A ]gg]cb BUbWnny D`UW ]g U &(!\ci f`ZUW)]mmh\UngYfj Yg g]b[`Y`\ca Y`Ygg k ca Yb'': U]h\ ` A laglebicb; fubhubx: Ulth A laglebicb; this jiybi y ufy &(!\ci fizuWjhjygth\ungyfj y glb[ y i \ca Y`Yqq`a Yb`]b`Xcfa ]hcfmqlm`Y`Ybj ]fcba Ybhq"G\Y`hYf`qhUZZUbX`fUd]X`fY!\ci q]b[`WUqY` a UbU[Yfg'Ugg]ghW]Ybhg'k ]h\ UWYgg]b[ bYYXYX VWgY a UbU[Ya YbhgYfj ]Wgž]bWl X]b[ a YbHJ`\YU'h\ WUfY UbX gi VgHJbWY UVi gY IfYUha YbH'6fYU\_ZJJghž`i bW\žUbX X]bbYf UfY` dfcj ]XYX Zcf fYg]XYbhgž Ug k Y`` Ug ch\Yf `ck!]bWta Y ]bX]j ]Xi U`gž]b h\Y 7ca a i b]hm? ]hW\Ybž `cVWhYX`UnBcfh\; fUbn'5jYbiY"J]g]cbžaYX]VW`žUbX`XYbHJ``VWfY`UfY`dfcj]XYX`Un'h\Y`gUaY` `cWhicb"

BUbVMM D'UW WUb q\Y'HYfi d hc', k ca Yb"H\Y g\Y'HYfYl dUbXg WUdUMmVYhk YYb a ]X! CW/cVYf UbX a [X!5df] Vm\* VYXg hc Ugg]ghk ]h, K ]bh/f Cj YfZck ": U]h, A ]gg]cb cb , h 5j Ybi Y \UgUb][\hmaUl]aia WVdUVV[mcZ-) VYXg": U]h\A]qq]cbcb; fUbhU`qc\Ug`VVdUVV[mZcf-) ' a YbžUb ]bWfYUgY cZ\* VYXg gHUfh]b[ ]b: N&\$&\$"H\Y g\Y hYfg YI dUbX WUdUVJhmZfca a ]X! CW/cVYf ha a [X!5df] ha gYfi Y Ub UXX]hlabu % a Yb UbX \* k ca Yb dYf b][\h]b dYU ci YfZck : **h**a Y""

`GHUFHIIb[`k]H\:: M&\$\$, `zH\Y`UVc|Y`q\Y`HYfq`kYfY`Y|U`iUHYX`Uq`U`k\c`Y`UbX`[cU`q`YqHUV`]q\YX Zcf'U``h\fY'g\Y`hYfg'Wca V]bYX" =b: N&\$%+žBUbWhNj D`UW'UbX: U]h\ A ]qq]cb cb \*h GhYYh a cj YX hc U bYk g\Y`hYf ZUW]hmcb; fUbhGhfYYh'''

Dfc[fla Ci h/ka Y 5/N] Yi Ya Ybh+#%#% hc %&# %#% . 9a Yf[Yb/M/G\Y]h/f"

A YUgi fY <sup>.</sup>		GYa ]lUbbi Ư˙ ; cƯ˙	GYa]!Ubbi U' 5 <b>Vh</b> i U'	5 <b>V\()</b> Yj YX' '
<ci gy\c`xg'gyfj="" th="" yx''<=""><th>٠,</th><th>%\$\$<sup>.</sup></th><th>%\$&amp;<sup>.</sup></th><th>M/g<sup>·</sup></th></ci>	٠,	%\$\$ <sup>.</sup>	%\$& <sup>.</sup>	M/g <sup>·</sup>
5j YfU[Y`@Yb[h\`cZGhUm`	8Ung <sup>*</sup>	()	(, '	M/g <sup>-</sup>
Gi WWYggZi `` <ci 'ci="" g]b[="" hwta="" td="" yg''<=""><td>٠</td><td>' &amp;%'</td><td>&amp;) ) ·</td><td>Bc<sup>-</sup></td></ci>	٠	' &%'	&) ) ·	Bc <sup>-</sup>
Gi WWyggZi`` <ci g]b['ci="" hwta="" td="" yg''<=""><td>Ι.</td><td>1.1.4</td><td>'\$'</td><td>M/g<sup>·</sup></td></ci>	Ι.	1.1.4	'\$'	M/g <sup>·</sup>
CWN/dUbWhFUhY%	Ι.	%\$\$ <sup>.</sup>	%\$\$ <sup>.</sup>	M/g <sup>·</sup>
FYVJJK]jj]ga '	Ι.	O%\$ ·	%) .	M/g <sup>·</sup>
A cj Ya Ybh¥	Ι.	%) .	%% <sup>.</sup>	B#5 <sup>-</sup>
DUgg Dfc[fUa '7Yfh]Z]WUh]cb'	_	DUgg:WfhjZjWJhjcb:	7ca d`]Ubh	M/g <sup>-</sup>

<sup>%)</sup>ı "U`ck UV`Y'j Uf]UbW'"=ZgngıhYa "XYa UbX']g'VY`ck "WdUMJhm'gi W. 'h. Uh'h. YfY']g'bc'k U]h]qhcf'U'hYfbUHY'cj YfZck "bYYX'h. Yb' h\Y'cWWdUbWmfUhY'a UmZU``VY`ck'-)ı"

<sup>&</sup>amp; A cb]hcfYXžVi hbchYj U`i UhYX"

<sup>``</sup>GHUFND[`+#%#&\$%+`fUd]X:fY!\ci\_g]b[`gYfj]Wrg'UfY'dfcj]XYX:Vmt\Y:NA:75:FUd]X:FY!\ci\_g]b[`dfc:YVM'Gca\_Y'cZh\Y'a\_YUgi\_fYg' ZcfYa Yf[YbWrig\Y'hYfg'UfY'g\UfYX'k]h\'h\Y'fUd]X'fY!\ci g]b['dfc[fUa "'



7UHY[cfm 9a Yf[YbWhG\Y`HYf fG]b['Y'5Xi `hgL'

DYfZcfa UbW. ... A YX]i a

HNY'dfc[fUažk\]M\kUg']ad'YaYbhYX']b'GYdhYaVYf'&\$%%Zdfcj]XYg'YaYf[YbWh'\cig]b['hc'jYhYfUbg'U'cb['k]h\gYfj]MYg'Wbg]ghYbhk]h\h\Y'<YU'h\r7UfY'Zcf'<caY'Ygg'JYhYfUbg'fk7<JŁ'Dfc[fUacVYWhj Yg''HNY'[cU'cZh\Y'dfc[fUa]g'hcfYacjY\caY'Yggj'YhYfUbg'Zfca'h\Y'ghfYYhcf'\UV]hUh]cb'ibZ]h'Zcf'jYhYfUbg'UbX'd'UM'h\Ya']b'Waaib]m!WUgYXZfYg]XYbh]U'Ybj]fcbaYbhg'''H\Y'dfc[fUa]g'ZcWygYX'cb'UXXfYgg]b['h\Y'bYYXg'cZh\Y'acghji'bYfUbg''''UbX'Uhf]g\_\caY'Yggj'YhYfUbg''''

H\Y'dfc[fUa 'VWb'd\UM'i d'hc'&( j YhYfUbg'f&\$'a Yb'UbX'( k ca YbŁ'UhcbY'h]a Y']b'gUZYž' Wta a i b]hn!\VUgYX'g\Y'hYf''''

# Dfc[fUa Ci hNta Y 5VN]Yj Ya Ybh+#%#% hc %&# %#% . 9a Yf[YbWhG\Y`hYf

A YUgi fY <sup>.</sup>		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!Ubbi ປ΄ 5 <b>VM</b> ປ΄	5 <b>VN]Yj</b> YX <sup>.</sup>
<ci gy\c`xg'gyfj="" td="" yx'<=""><td></td><td>+) .</td><td>- + ·</td><td>M∕g<sup>·</sup></td></ci>		+) .	- + ·	M∕g <sup>·</sup>
Gi WWggZi` <ci g]b['ci="" lwta="" td="" y''<=""><td></td><td>&amp;* `</td><td>&amp;) ·</td><td>M∕g<sup>·</sup></td></ci>		&* `	&) ·	M∕g <sup>·</sup>
Gi WWggZi` <ci g]b['ci="" lwta="" td="" y''<=""><td>1</td><td>) \$</td><td>' &amp; `</td><td>Bc<sup>·</sup></td></ci>	1	) \$	' & `	Bc <sup>·</sup>
5j YfU[Y@Yb[H\rcZGHJm	8Ungi <sup>*</sup>	()	(, .	M∕g <sup>·</sup>
CWW dUbWhFUhY&	1	%\$\$ <sup>-</sup>	- &`	Bc <sup>·</sup>
FYVJK]j ]ga '	1	O%\$ ·	% .	M∕g <sup>·</sup>
A cj Ya Ybh	1	% .	%( .	B#5 <sup>-</sup>
DUgg Dfc[fUa '7Yfh]Z]WJh]cb'		DUgg WrftjZJWJtjcb	7ca d`]Ubh	M∕g <sup>·</sup>

"A cb]hcfYXžVi hbchYj U'i UhYX"

\_

<sup>%</sup> Dfc[fUa bchZ bXYX Vm7G6"

<sup>&</sup>amp;`) ı `U``ck UV`Y'j Uf]UbW''':-ZgngjhYa 'XYa UbX']g'VY`ck 'WdUW]Imigi W\'th\Uhih\YfY']g'bc'k U]h]ghicf'U'hYfbUhY'cj YfZck 'bYYX'h\Yb' h\YcWNYdUbWhfUhY'a UmiZU``VY`ck '-) ı "'

#### : M&\$&\$ Dfc[fUa '9] U'i Uh]cb

7UHY[cfm 9a Yf[YbWhG\Y`hYf`fG]b[`Y`5Xi`hgk'

5[YbWm A Ufm\UjYb

**Dfc[fUa**. 9b[U[Ya Ybh7YbhYf!GUZYhm

DYf[cX. +#%#% ! %&#' %#%

DYfZcfa UbW.....<][\

Dfc[fUa Ci h/ka Y 5/k]/j Ya Ybh+#%#% hc %&# %#% . 9a Yf[YbWhG\Y`h/f

A YUgi fY <sup>.</sup>		GYa ]!Ubbi ປົ΄ ; cປົ΄	GYa]!Ubbi U` 5 <b>Vhi</b> U`	5 <b>W</b> (]Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" th="" yx''<=""><th>٠,</th><th>'+)</th><th>) \$, `</th><th>M<b>r</b>g<sup>·</sup></th></ci>	٠,	'+)	) \$, `	M <b>r</b> g <sup>·</sup>
5j YfU[Y@Yb[h\cZGHJm	8Ungi <sup>*</sup>	&\$ ·	%( .	M <b>r</b> g <sup>·</sup>
Gi WWggZi `Ci KWta Yg''	٠,	%\$& <sup>.</sup>	%( - '	M <b>r</b> g <sup>·</sup>
Gi WWggZi `Ci KWta Ygʻ	1 '	' \$ <sup>·</sup>	' %'	M <b>r</b> g <sup>·</sup>
FYVJX]j]ga	1 '	O%\$ ·		M <b>r</b> g <sup>·</sup>
8Yhcl '9l ]hg'	1 .	%\$ ·	%( .	M <b>r</b> g <sup>·</sup>
DUgg Dfc[fUa 7Yfh]Z]VVIh]cb		DUgg WfhjZwhjcb	Bcb!7ca d`]Ubh	Bc <sup>*</sup>



7UhY[cfm 9a Yf[YbWmG\Y`hYffG]b[`Y`5Xi `hgk'

5[YbWm A Ufm\Ui Yb

Dfc[fUa. 9b[U[Ya Ybh7YbhYf] G\Y`hYf&<ci q]b[

+#%#%- '!'%&#' %#%-DYfcX.

<11/ DYfZcfa UbW."

HAY 9b[U[Ya Ybh7YbhYfff97LUhA Ufm\Uj Yb dfcj]XYggYfj]Wrghca YYhhAY VUg]WbYYXgcZ \ca Y`Yqq`a Yb`UbX`k ca Yb`k\c`UfY`]bYVf]UhYX`UbX`i bUV`Y`hc`qY`ZIVWfY`cf`ch\Yfk`]qY`UfY`]b` byyx cza cfy jbhybaji y gyfi jw gi ddcfng" Hvy 97 gyy\_g nc a chij Uhy wyybhg nc nu\_y nvy YggYbh]U`ghYdg`hc`U`VYhYYf``]ZYž]bWiX]b[`ghUV`Y`\cig]b["GYfj]Wrg`cZZYfYX`Uh'h\Y`97` G\Y`hYf&<ci g]b[ 'dfc[fUa ']bWi XY gUZYžgYVVYfY Ya Yf[YbWng\Y`hYf'U`cb[ k]h\ gWnYYb]b[ 'UbX' fYZYffU`Zcf`\ci q]b[ža YX]\W;žVY\Uj ]cfU`\YU;h\WfYžUbX;ch\Yf`gc\NU`gYfj ]\Wg":\ayV\f]UhYX` ]bX]j ]Xi Ug UfY Vfci [\hhc h\Y 97 VmBYh/WfY FYUW Ci hK cf\_Yfg UbX di V`]WgUZYhmcZZ]Wfg" GHUfhillo[ >i `m%2&\$%( žA Ufm\uj Yb 9b[ U[ Ya Ybh7YbhYf qd`]h]bhc hk c dfc[ fUa g VUqYX cb` WilybhgiNwa a jha Ybhhc gyy\_\ci gjb["7`]Ybhg jb G\Y`hYf&<ci gjb[ dfc[fUa UfY jbhYfYghYX jb cVHJ|b]b[ \ci q]b[ \UbX U \cdots ]b\_YX k ]h\ fUd]X fY!\ci q]b[ \WqY a UbU[ Yfq Zcf dfcj ]q]cb cZ gYfj ]Wyg" A Ufm\Uj Yb\Ug h\Y WUdUV]mzcf (& a Yb UbX, k ca Ybzci hcZk\]W\% VYXg zcf a Yb UbX' VYXq Zcfk ca Yb UfY XYX]WUHYX hc h\Y G\Y hYf&<ci q]b[ dfc[ fUa "

#### Dfc[fUa Ci hMta Y 5VN]Yi Ya Ybh+#%#% hc %&# %#%. 9a Yf[YbWhG\Y`hYf

A YUgi fY		GYa ]!Ubbi ປົ ; cປົ	GYa]!Ubbi Uʻ 5 <b>VM</b> Uʻ	5 <b>W.]</b> Yj YX' ·
<ci gy\c`xg'gyfj="" th="" yx''<=""><th>,</th><th>*) '</th><th>+, .</th><th>M/g<sup>-</sup></th></ci>	,	*) '	+, .	M/g <sup>-</sup>
5j YfU[Y@Yb[h\cZGhUm	8Ung <sup>r</sup>	()	( - '	M/g <sup>·</sup>
Gi WWYggZl`~ <ci ci="" g]b[="" hwta="" td="" yg``<=""><td>,</td><td>%* ·</td><td>1.1.4</td><td>M/g<sup>·</sup></td></ci>	,	%* ·	1.1.4	M/g <sup>·</sup>
Gi WWggZi` <ci ci="" g]b[="" hwta="" td="" yg``<=""><td>Ι,</td><td>1.1.1</td><td>), '</td><td>M/g<sup>·</sup></td></ci>	Ι,	1.1.1	), '	M/g <sup>·</sup>
Dfc[fUa 'CWW dUbWhFUhY%'	1	%\$\$ <sup>*</sup>	%\$* ·	M/g <sup>-</sup>
FYVJjX]j ]ga '	Ι,	O%\$ ·	%( '	M/g <sup>-</sup>
A cj Ya Ybh <sup>v</sup>	Ι,	%) .	( .	B#5 <sup>-</sup>
DUgg:Dfc[fUa:7Yfh]Z]VVJh]cb::		DUgg:WfhjZjWJhjcb:	Bcb!7ca d`]Ubh	Bc <sup>·</sup>

& A cb]hcfYXžVi hbchYj U`i UhYX"

<sup>%)</sup>ı "U`ckUVY'j Uf]UbW""=ZgngjHYa "XYa UbX']g'VY'ck "WdUM]Imigi Wi hi Uh'hi YfY']g'bc'k U]h]ghicf'U'hYfbUHY'cj YfZck 'bYYX'hi Yb' h\Y'cWWdUbWmfUhY'a UmZU``VY`ck'-)ı"

<sup>&#</sup>x27;GHUFN]b['+#%#&\$%+fUd]XfY!\cig]b[gYfj]WrgUfY'dfcj]XYXVmh\YMA75FUd]XFY!\cig]b[dfc^YWfGcaYcZh\YaYUgifYg ZcfYa Yf[YbWrig\Y'hYfg'UfY'g\UfYX'k]h\'h\Y'fUd]X'fY!\ci g]b['dfc[fUa "'

# : M&\$&\$ Dfc[fUa 9jUi Uhjcb

7UhY[cfm 9a Yf[YbWmG\Y`nYf'fG]b[`Y'5Xi `hop!'

5[YbWm Gci h\YUghž±bW

Dfc[fUa." : f]YbXg cZh\Y < ca Y`Ygg#A YbÑg G\Y`hYf

DYfcX. +#%#% !`%&#` %#%

DYfZcfa UbW." @ck ·

H\Y: f]YbXgcZh\Y <ca Y`YggflC<ŁA YbÑyG\Y`hYf]g'U'&(!\ci f`ZUNY]hmh\UhgYfj Ygg]b[`Yž \ca Y`Yqq`a Yb`]b`U`Xcfa ]hcfmqhm`Y`Ybj ]fcba Ybh'`GYfj ]Wg`]bWl XY`a YYh]b[`VUq]WbYYXg`gi W\` UgʻXU1`ma YUʻqžq\ck YfqžVYX``]bYbqžhck Y`gʻUbX'dYfqcbU``\nfi]YbY`]hYa qž`Ui bXfmZUW]h]Yqž UbX h/`Yd\cbY i gYžUg k Y```Ug dfcj ]X]b[ ``]b\_U[ Y hc VVlgY a UbU[ Ya YbhgYfj ]Wrg"H\Y g\Y`hYff\y fygci fw wbhyf]g uj u]`uv`y Zcfh\y ya d`cma ybhubx`\ci g]b[ byyxg cZw]ybhg": C< vy[ub` : M&\$&\$ k ]h\ WUdUNJhmZcf% \$ a Ybždi gi d hc%) UXX]hjcbU a Yb dYfb][\hcb Wthgcf cj YfZck a Uhg Xi f]b[ gYUgcbg cj YfZck žZfca a ]X!CVIIcVYf hc a ]X!5df]" 7UdUVIImk Ug ]bVfYUqYX hc %\* \$ VYXq d`i q %\$ qYUqcbU`cj YfZck V/chq ]b A UfVN &\$&\$"

Dfc[fUa Ci hWta Y 5WN]Yi Ya Ybh+#%% hc %&# %#% . 9a Yf[YbWhG\Y hYf]

A YUgi fY <sup>.</sup>		GYa ]lUbbi ປົ΄ ; cປົ΄	GYa]!Ubbi U` 5 <b>Vh</b> i U`	5 <b>W</b> (]Yj YX' ·
<ci gy\c`xg'gyfj="" td="" yx'<=""><td></td><td>+) \$</td><td>*%</td><td>Bc<sup>·</sup></td></ci>		+) \$	*%	Bc <sup>·</sup>
5j YfU[Y`@Yb[h\`cZGhUm	8Ung <sup>r</sup>	()	( - ·	M∕g <sup>·</sup>
Gi WWYggZl`~ <ci g]b[~ci="" hwta="" td="" yg~<=""><td></td><td>&amp;\$) ·</td><td>%- ·</td><td>Bc<sup>·</sup></td></ci>		&\$) ·	%- ·	Bc <sup>·</sup>
Gi WWYggZl`~ <ci g]b['ci="" hwta="" td="" yg''<=""><td>Ι,</td><td>1.1.1</td><td>&amp;+ ·</td><td>Bc<sup>·</sup></td></ci>	Ι,	1.1.1	&+ ·	Bc <sup>·</sup>
CWW dUbWinFUnY%	Ι,	%\$\$ <sup>.</sup>	<b>%\$'</b> ·	M∕g <sup>·</sup>
FYVJjX]j ]ga ''	Ι,	O%\$ ·	&( ·	Bc <sup>·</sup>
A cj Ya Ybl⁴	1	%) .	% '	B#5 <sup>-</sup>
DUgg:Dfc[fUa '7Yfh]Z]Wlh]cb''		DUgg WffjZWhjcb	7ca d`]Ubhk ]h\ 7cbX]h]cbg	M/g <sup>·</sup>

<sup>%)</sup>ı "U`ck UV`Y'j Uf]UbW'"=Zgngıh'a "XYa UbX']g'VY'ck "WdUW]Imgi W. 'h. Uh'h. YfY']g'bc'k U]h]ghcf'U'hYfbUhY'cj YfZck "bYYX'h. Yb' h\Y'cWWdUbWmfUhY'a UmZU``VY`ck'-)ı"

<sup>&</sup>amp; A cb]hcfYXžVi hbchYj U`i UhYX"

<sup>``</sup>GHUFND[`+#%#&\$%+`fUd]X`fY!\ci\_g]b[`gYfj]Wrg'UfY`dfcj]XYX`Vnth\Y`NA`75`FUd]X`FY!\ci\_g]b[`dfc^YVM'Gca\_Y`cZh\Y`a\_YUgi\_fYg` ZcfYa Yf[YbWrig\Y'hYfg'UfY'g\UfYX'k]h\'h\Y'fUd]X'fY!\ci g]b['dfc[fUa "'



7UhY[cfm 9a Yf[YbWhrG\Y`hYffG]b[`Y`5Xi `hg\z 5[YbWhr Jc`i bhYYfg`cZ5a Yf]WJ'C\]c/ =bX]UbU

**Dfc[fUa**. J 5 9a Yf[YbWfrkci g]b[% **DYf|cX**. +#%#% ! %&# %#%

DYfZcfa UbW. ... A YX]i a

HNY'dfc[fUažk\]M\kUg']ad'YaYbhYX'GYdhYaVYf'&\$%\$ždfcj]XYg'YaYf[YbWh\cig]b['hc'jYhYfUbg'U'cb['k]h\gYfj]MYg'Wbg]ghYbhk]h\h\Y'<YU'h\'7UfY'Zcf'<caY'Ygg'JYhYfUbg'fk7<JEDfc[fUa'cVYVMjYg'"HNY'[cU'cZh\Y'dfc[fUa']g'hc'fYacjY\caY'Ygg'jYhYfUbg'Zca'h\Y'ghfYYhcf'\UV]hUh]cb'i bZ]hZcf'jYhYfUbg'UbX'd'UM''h\Ya']b'Waai b]hn!VUgYXžfYg]XYbh]U''Ybj]fcbaYbhg'''HNY'dfc[fUa']g'ZcWygYX'cb'UXXfYgg]b['h\Y'bYYXg'cZh\Y'acghji''bYfUbg''''UbX'Uhf]g\_\caY'Ygg'jYhYfUbg''''

5gicZCVMcVYfi%zi&\$%\*žh\Yidfc[fUaiVWdUVNmi]bWfYUgYXihci%) VYXgiZfcaih\Yidf]cfi% VYXgii

#### Dfc[fUa Ci h/k/a Y 5/k/]Yj Ya Ybh+#%#% hc %&# %#% . 9a Yf[YbWhG\Y`h/f

A YUgi fY		GYa ]!Ubbi U` ; cU`	GYa]!Ubbi U` 5 <b>Vh</b> i U`	5 <b>VN]</b> Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" td="" yx'<=""><td></td><td>* \$ '</td><td>* '</td><td>M/g<sup>-</sup></td></ci>		* \$ '	* '	M/g <sup>-</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg''<=""><td></td><td>&amp;'</td><td>' %'</td><td>M/g<sup>-</sup></td></ci>		&'	' %'	M/g <sup>-</sup>
Gi WWggZi`~ <ci 'ci="" g]b[="" hwta="" td="" yg''<=""><td>Ι,</td><td>) \$ .</td><td>) + .</td><td>M/g<sup>-</sup></td></ci>	Ι,	) \$ .	) + .	M/g <sup>-</sup>
5j YfU[Y@Yb[h\cZGHUm	8Ung <sup>r</sup>	()	(&	M/g <sup>·</sup>
CWW dUbWnFUnY&	Ι,	%\$\$ <sup>*</sup>	- 1 - 1	Bc <sup>·</sup>
FYVJjK]j ]ga '	Ι,	O%\$ ·	&& <sup>.</sup>	Bc <sup>·</sup>
A cj Ya Ybh	Ι,	%) .	%%	B#5 <sup>·</sup>
DUgg Dfc[fUa '7Yft]]]Whjcb'		DUgg:Wfh]Z]Wlh]cb	7ca d`]Ubhk]h\ 7cbX]h]cbg	M/g <sup>-</sup>

"A cb]hcfYXžVi hbchYj U`i UhYX"

0/

<sup>%</sup> Dfc[fUa bchZ bXYX Vm7G6"

<sup>&</sup>amp;) ı Ürck UV'Y'j Uf]UbW'''=ZgnghYa 'XYa UbX']g'VY'ck 'WUdUW]migi W. 'h. Uh'h. YfY']g'bc'k U]h]ghcf'U'hYfbUhY'cj YfZck 'bYYX'h. Yb' h.Y'cWW dUbWrfUhY'a UmZU'''VY'ck '-) ı "'

# : M&\$&\$ Dfc[fUa '9j Ui Uh]cb

7UhY[cfm 9a Yf[YbWhG\Y`hYf`fG]b[`Y`5Xi `hgk'

Dfc[fUa. A YbÑŋ UbX K ca YbÑŋ Cj YfZck

DYf]cX. +#%#% ! %&# %#%

DYfZcfa UbW. .. B#5%

±0: M&\$&\$zh\Y MA 75cZ7YbhfU`C\]ckcf\_YXk]h\7G6dUfhbYf`U[YbW]Yghc WccfX]bUhY`UbX`dfcj]XY`cjYfZck Zcf`g]b[`Y`UXi`ha Yb"8if]b['h\Yk]bhYf`cjYfZck gYUgcbzh\Y MA 75Ng`Z]fghdf]cf]hm]ghcdfcj]XY`cjYfZck g\Y`hYf`hc\ca Y`Ygg`]bX]j]XiU`g`gYY\_]b[`fYZi[Y`Zfca YI'hYa Y`kYUh\Yf`WbX]h]cbg'k\Yb'h\Y`g\Y`hYfg`UfY`Uh\WbUV]hm"

H\Y'g\Y'h\f`WbhJ]bg`[YbXYf`gdYV]Z]Wg`YYd]b['ei UfhYfgžg\ck YfgžfYghfcca gžUbX'X]b]b['ZJW]]hJYg"H\Y'ZJW]]hmU`gc`WbhJ]bg`U`Wa a YfW]U`\_]hW\Yb h\UhU``ck g`dfYdUfUh]cb`cZ\cha YU`g`Zcf`U``fYg]XYbhgžghcfU[Y`UbX``Ui bXfmZJW]]hJYgžcZZ]Wg`Zcf`fUd]X`fY!\ci g]b['WgY'a UbU[Yfg`hc`a YYhk]h\`fYg]XYbhg`UbX'k cf\_cb`\ci g]b['[cU`gžfYg]XYbhfYgci fW`UbX`Wa di hYf`fcca gžghJZZUXa]b]ghfUhjj Y`gdUWZgYWfYX']bhJ\_Y`UfYU'k]h\`U`k U]hJb['fcca 'UbX``cVnžcZZ]W'Zcf`fYWfXg`ghcfU[Yždi V`]WfYghfcca gžUbX'Ub`ci hXccf`dUhjc"

# Dfc[fUa Ci hwta Y 5Wk]Yj Ya Ybh+#%#% hc %&# %#% . A YbNy 9a Yf[YbWhG\Y hYf

A YUgi fY'		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!Ubbi U' 5 <b>Vh</b> i U'	5 <b>VN</b> ]Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" td="" yx'<=""><td></td><td>))\$</td><td>( - &amp; `</td><td>Bc<sup>·</sup></td></ci>		))\$	( - & `	Bc <sup>·</sup>
5j YfU[Y@Yb[h\cZGHJm	8Ung <sup>*</sup>	()	* '	M/g <sup>·</sup>
DUgg Dfc[fUa 7Yfh]Z]WJh]cb		DUgg:WfhjZjWJhjcb:	B#5 <sup>-</sup>	B#5 <sup>-</sup>

Dfc[fUa 'Ci hWta Y'5Wk]Yj Ya Ybh+#%#% hc'%&#' %#%. K ca YbNy 9a Yf[YbWhG\Y'hYf'

A YUgi fY		GYa ]!Ubbi ປົ΄ ; cປົ΄	GYa]!UbbiU` 5WhiU`	5 <b>W</b> (]Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" td="" yx'<=""><td></td><td>&amp;+\$<sup>·</sup></td><td>' * - '</td><td>M/g<sup>·</sup></td></ci>		&+\$ <sup>·</sup>	' * - '	M/g <sup>·</sup>
5j YfU[Y@Yb[h\cZGhUm	8Ungj <sup>*</sup>	().	1 .	M/g <sup>·</sup>
DUgg Dfc[fUa '7Yfh]Z]WJh]cb'		DUgg Wfh]Z]Wh]cb	B#5 <sup>-</sup>	B#5 <sup>-</sup>

NA 75 i A YbÑg UbX K ca YbÑg Cj YfZck

(&

 $<sup>^{1} \</sup>text{ A YbfijgYUgcbU`cj YfZck `cdYbYX`\%$}\# \%\# \text{"`K ca YbfijgYUgcbU`cj YfZck `cdYbYX`\%$}\# \%\# \text{"`Dfc[fUa g'bchfUlYX'''} \text{ A YbfijgYUgcbU`cj YfZck `cdYbYX`$}\# \%\# \text{"`Dfc[fUa g'bchfUlYX'''} \text{ A YbfijgYUgcbU`cj YfZck `cdYbYX`$}\# \%\# \text{"`Dfc[fUa g'bchfUlYX''''} \text{ A YbfijgYUgcbU`cj YfZck `cdYbYX`$}\# \%\# \text{"`Dfc[fUa g'bchfUlYX''''' A YbfijgYUgcbU`cj YfZck `cdYbYX`$}\# \%\# \text{``Dfc[fUa g'bchfUlYX''''' A YbfijgYUgcbU`cj YfZck `cdYbYX`$}\# \%\# \text{``Dfc[fUa g'bchfUlYX''''' A YbfijgYUgcbU`cj YfZck `cdYbYX`$}\# \%\# \text{``Dfc[fUa g'bchfUlYX''''' A YbfijgYUgcbU`cj YfZck `cdYbYX`$} \tag{\text{a YbfijgYUgcbU`cj YfZck `cdYbYX`} \tag{\text{a YbfijgYUgcbU`cj YfZck `c$ 



7UHY[cfm 9a Yf[YbWhG\Y`hYffG]b[`Y 5Xi `hgk'

5[YbWh MA 75"

Dfc[fUa. JUb 6i fYb K ca YbÑy G\Y`hYf"

DYflcX. +#%#% ! %# %#%

DYfZcfa UbW. ... A YX]i a ...

HNYJUb 6i fYb K ca Yblyg GNY hYf 'UWW dhg ]bhJ\_Yg & ( `\ci fg 'U XUmh\fci [\ h\Y < ca Y Ygg < ch]bY" Gi ddcfh]j Y gYfj ]lwg ]bwi XY a YYh]b[ 'VUg]wbYYXg gi W Ug XU] ma YU gžg\ck YfgžVYX `]bYbgžhck Y`g 'UbX dYfgcbU`\n[]YbY]hYa gž`Ui bXfmZJW]h]ygžUbX hY`Yd\cbY i gYžUg k Y``Ug dfcj ]X]b[ 'WlgY a UbU[ Ya Ybhih\fci [\ fUd]X fY!\ci g]b[ 'WlgY a UbU[ Yfg 'UbX``]b\_U[ Y hc gYfj ]Wg" H\Y g\Y hYf fYgci fW fcca g 'UfY 'Uj U] 'UVY 'Zcf h\Y Ya d`cna Ybh'UbX`\ci g]b[ 'bYYXg cZ W]Ybhg" H\Y fYgci fW fcca g 'dfcj ]XY Wa di hYf 'UWW ggž\ci g]b[ 'UbX Ya d`cna Ybh`]ghgž Vi g dUggYgžUbX`\Y`d ]b 'Udd`n]b[ 'Zcf'di V`]WUgg]ghUbW" 'H\Y 'J Ub 6i fYb K ca Yblyg G\Y`hYf`\Ug WldUN]mmZcf'%) %k ca Yb 'UbX 'Zfca 'a ]X!CWcVYf hc 'a ]X!5df]` ]hg\Y`hYfg'i d hc + 'UXX]h]cbU` k ca Yb'dYf'b][ \hžUg dUfhcZh\Y gYUgcbU`cj YfZck d`Ub"

# Dfc[fUa Ci hNta Y 5VN]Yj Ya Ybh+#%#% hc %&# %#% . 9a Yf[YbWhG\Y`hYf

A YUgi fY		GYa ]!Ubbi ປົ΄ ; cປົ΄	GYa]!Ubbi U' 5 <b>Vh</b> i U'	5 <b>V</b> ()]Yj YX
<ci gy\c`xg'gyfj="" td="" yx'<=""><td></td><td>* - \$</td><td>* - &amp;</td><td>M/g<sup>·</sup></td></ci>		* - \$	* - &	M/g <sup>·</sup>
5j YfU[Y`@Yb[h\`cZGhUm	8Ung <sup>r</sup>	()	) \$ .	M∕g <sup>·</sup>
Gi WWggZi`~ <ci 'ci="" g]b[="" lwta="" td="" yg''<=""><td></td><td>%+, ·</td><td>%( &amp;<sup>.</sup></td><td>Bc<sup>·</sup></td></ci>		%+, ·	%( & <sup>.</sup>	Bc <sup>·</sup>
Gi WWggZi`~ <ci 'ci="" g]b[="" hwta="" td="" yg'<=""><td>Ι,</td><td>1.1.1</td><td>&amp;* ·</td><td>Bc<sup>·</sup></td></ci>	Ι,	1.1.1	&* ·	Bc <sup>·</sup>
CWW dUbWrif UrY%	1	%\$\$ <sup>-</sup>	- ,	M∕g <sup>·</sup>
FYVJJX]j ]ga '	Ι,	O%\$ ·	· -	M/g <sup>·</sup>
A cj Ya Ybh.	Ι,	%) .	%% <sup>.</sup>	B#5 <sup>-</sup>
DUgg Dfc[fUa '7Yft]Z]Wlh]cb''		DUgg WfhjZjVVhjcb	7ca d`]Ubhk ]h\ 7cbX]h]cbg	M/g <sup>·</sup>

<sup>%)</sup> ı "U"ck UV"Y j Uf]UbW"" ⊋gnghYa "XYa UbX"]g"VY'ck "WdUM]hmgi W\"h\Uhih\YfY"]g"bc"k U]h]ghcf"U'hYfbUhY'cj YfZck "bYYX'h\Yb" h\Y'cWWdUbWhfUhY'a Um'ZU" "VY'ck '-) ı ""

<sup>&</sup>amp; A cb]hcfYXžVi hbchYj U`i UhYX"

<sup>``</sup>GHUFIJD[`+#%#&\$%+`fUd]X`fY!\ci g]b[`gYfj]WYg'UfY'dfcj]XYX`Vmth\Y`M\75`FUd]X`FY!\ci g]b[`dfc^YVW'Gca Y`cZh\Y`a YUgi fYg` ZcfYa Yf[YbWrg\Y`hYfg'UfY`g\UfYX`k]h\`h\Y`fUd]X`fY!\ci g]b[`dfc[fUa "``

: M&\$&\$ Dfc[fUa '9j U'i Uh]cb'

# Ci lfYUW Dfc[fUa g

**7UhY[cfm** Ci hfYUVX Dfc[fUa gi

5[YbWm A Ufm\UjYb Dfc[fUa . Ci HYUW

DYf]cX. +#%#%!%# %#%

DYfZcfa UbW." @ck

A Ufm', Uj YbNj Ci HYUW. dfc[fUa z]b]h]UhYX]b &\$\$' z]g XYg][bYX hc Yb[U[Y\ca Y`Ygg dYfgcbg`]j]b[ci hXccfg UbX Ugg]ghh\Ya]b a cj ]b[]bhc Uddfcdf]UhY\ci g]b[Ugei]\www.mugdcgg]V`Y"5\www.UvcfUhjj Y ci HYUW. ghfUhY[mk Ug]a d`Ya YbhYX VmA Ufm\Uj Yb ghUfhjb[]b zi `m%z&\$\%"GYfj]\wg]bWi XY UggYfhjj Y ci HYUW. Ung]hYg k\YfY\ca Y`Ygg dYfgcbg Wbb[fY[UhYzdfc!UWhjj Y`Yb[U[Ya YbhzfYZYffU`hc bYYXYX Wa a i b]hmgYfj]\wgz`]b\_U[Yhc g\Y`hYf`UbX`\ci g]b[z'cVhJ]b]b[V]fh\ WfhJZ]\whYg UbX ch\Yf`dYfgcbU`]XYbhJZ]\wh\gg hc VYbYZ]hgz\wcfX]bUh]cb cZgYfj]\wg k]h\ g\Y`hYfg`UbX\ci g]b[dfcj]XYfgz\UbX dUfh]\wh\gg hc VYbYZ]hgz\wcfX]bUh]cb cZgYfj]\wg k]h\ g\Y`hYfg`UbX\ci g]b[dfcj]XYfgz\UbX dUfh]\wh\gu hcb [fUa ``]b\_g\w]Ybhg k]h\ 7G6\8]fY\W7\]Ybh5gg]ghUbW`Z bXg`UbX ch\YfZ]bUb\yU`UbX a UhYf]U`Ugg]ghUbW`cdh]cbg"

## Dfc[fUa Ci hwta Y 5Wk]Yj Ya Ybh+#%#% hc %&# %#% . Ci hfYUWk Dfc[fUa g

A YUgi fY		GYa ]!Ubbi Ư΄ ; cƯ΄	GYa]!Ubbi U' 5WhU'	5 <b>W</b> (]Yj YX <sup>.</sup>
7Uffncj Yf <ci gy\c`xg="" gyfj="" td="" yx%<=""><td>٠.</td><td>%\$\$<sup>*</sup></td><td>* .</td><td>B#5<sup>·</sup></td></ci>	٠.	%\$\$ <sup>*</sup>	* .	B#5 <sup>·</sup>
BYk <ci gy\c`xg`gyfj="" td="" yx<=""><td>٠,</td><td>%&amp;\$ ·</td><td>+%</td><td>Bc<sup>·</sup></td></ci>	٠,	%&\$ ·	+%	Bc <sup>·</sup>
<ci gy\c`xg'gyfj="" td="" yx'<=""><td>,</td><td>&amp;&amp;\$ ·</td><td>% - '</td><td>Bc<sup>·</sup></td></ci>	,	&&\$ ·	% - '	Bc <sup>·</sup>
9I]hYX' <ci gy\c`xg%'<="" td=""><td>,</td><td>%&amp;\$ ·</td><td>, +</td><td>B#5<sup>·</sup></td></ci>	,	%&\$ ·	, +	B#5 <sup>·</sup>
91]hYX' <ci gy\c`xg'hc'dg<<="" td=""><td>٠,</td><td>%* ·</td><td>%+ ·</td><td>M/g<sup>·</sup></td></ci>	٠,	%* ·	%+ ·	M/g <sup>·</sup>
Gi WWYggZi ``Ci HWta Yg`fG\Y`HYf`UbX` <ci g]b[ł`<="" td=""><td></td><td>- \$</td><td>) (</td><td>Bc<sup>·</sup></td></ci>		- \$	) (	Bc <sup>·</sup>
Gi WWggZi ``Ci HWda Yg`fG\Y`HYf`UbX` <ci g]b[ł`<="" td=""><td>1</td><td>+) .</td><td>* &amp; `</td><td>Bc<sup>·</sup></td></ci>	1	+) .	* & `	Bc <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>٠.</td><td>) \$ .</td><td>(&amp;</td><td>Bc<sup>·</sup></td></ci>	٠.	) \$ .	(&	Bc <sup>·</sup>
Gi WWyggZi`` <ci g]b['ci="" hwta="" td="" yg&'<=""><td>1</td><td>)) .</td><td>+, `</td><td>M/g<sup>·</sup></td></ci>	1	)) .	+, `	M/g <sup>·</sup>
I gU[Y'cZ7G6'8]fYWf7`]Ybh'5gg]ghUbW'	Ι.	&) ·	&' .	M/g <sup>·</sup>
FYVI[X]j ]ga	1	O%\$ ·		M/g <sup>-</sup>
DUgg Dfc[fUa 7Yff]ZJWJh]cb	•	DUgg:Wfh]Z]VVh]cb:	Bcb!7ca d`]Ubh	Bc <sup>·</sup>

\*<ci g]b[ 'ci h/t/a Yg'fd\Yfa UbYbhUbX`HfUbg]h]cbU'ŁYl dfYggYX`Ug'i 'cZU``gi WWggZi``ci h/t/a Yg''</p>

<sup>%</sup>A cb]hcfYXžVi hibchYj U'i UhYX/\ckYj Yfžh\]g'Wlb']a dUMrich\Yf'gi WWgg'a YUgi fYg''

ʻ<cigY\c`Xgʻh\Uh`\UX`UʻqiWWgqZi``\cig]b[ʻcihWaY`k]h\cihh\Y`Uqq]qhUbWrcZ875`kYfYYIWiXYXZfca'h\Y`W∀W`Uh]cb"ʻ

#### : M&\$&\$ Dfc[fUa '9j U'i Uh]cb

**7UHY[cfm** Ci HYUW\ Dfc[fUa gi

5[YbWm A Ufm\UjYb

Dfc[fUa. 7Ud]hU 7fcggfcUXg GdYVJU =a dfcj Ya Ybh8]ghf]Vhi! Ci hfYUVN%

DYf]cX. +#%#% ! %# %#%

DYfZcfa UbW. A YX]i a

±0.5df]`&\$%( žA Ufm`\Uj Yb fYW']j YX Ub ci hfYUW\ WbhfUWhZfca h\Y GdYV]U` =a dfcj Ya Ybh 8]g\vert{j Yfm8]ghf]WhfG=88Łhc Yl dUbX gYfj ]Wg]b Xck bhck b 7c`i a Vi g''

GYfj ]Wyg]bWi XY UggYfhjj Y ci HYUW Ung]hYg k \YfY \ca Y Ygg dYfgcbg Wtb[fY[UhYždfc!UWhj Y Yb[U[Ya YbhzfYZYffU hc bYYXYX Wta a i b]hmgYfj ]Wygz]b\_U[Y hc g\Y hYf UbX \ci g]b[ z cVhU]b]b[ V]fh\ WfhjZ]WUhYg UbX ch\Yf dYfgcbU ]XYbhjZ]Whjcbz UWWgg hc VYbYZ]hgz WtcfX]bUhjcb cZgYfj ]Wyg k ]h\ g\Y hYfg UbX \ci g]b[ dfcj ]XYfgz UbX dUfhjWdUhjcb ]b Wta a i b]hmd Ubb]b[ Zcf g\Y hYf UbX \ci g]b[ UWWgg"CbW \ci g]b[ ]g ]XYbhjZ]YXzh\Y Ci HYUW dfc[fUa `]b\_g W]Ybhg k ]h\ 7G6 8]fYWn7 ]Ybh5gg]ghUbW Zi bXg UbX ch\Yf Z]bUbV]U UbX a UhYf]U Ugg]ghUbW cdh]cbg" H\Y dfc[fUa YI dUbXYX]hg gYfj ]Wyg]b: N&\$%+"

#### Dfc[fUa Ci hwta Y 5Wk]Yj Ya Ybh+#%#% hc %&# %#% . Ci hfYUWk Dfc[fUa gi

A YUgi fY		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!Ubbi U` 5 <b>Vhi</b> U`	5 <b>W()</b> Yj YX <sup>.</sup>
7Uffncj Yf´ <ci gy\c`xg'gyfj="" td="" yx&´<=""><td></td><td>%) .</td><td></td><td>B#5<sup>-</sup></td></ci>		%) .		B#5 <sup>-</sup>
BYk ' <ci gy\c`xg'gyfj="" td="" yx'<=""><td></td><td>) \$ '</td><td>' + '</td><td>Bc<sup>·</sup></td></ci>		) \$ '	' + '	Bc <sup>·</sup>
<ci gy\c`xg'gyfj="" td="" yx`<=""><td></td><td>*) '</td><td>()</td><td>Bc<sup>·</sup></td></ci>		*) '	()	Bc <sup>·</sup>
9l]hYX' <ci gy\c`xg&'<="" td=""><td>٠</td><td>) \$ .</td><td>' + '</td><td>B#5<sup>-</sup></td></ci>	٠	) \$ .	' + '	B#5 <sup>-</sup>
91]hYX < ci gY\c`Xg`hc`DG<	٠.	) .	) .	M/g <sup>·</sup>
Gi WWggZi ``Ci hWta Yg`fG\Y`hYf`UbX` <ci g]b[ł'<="" td=""><td></td><td>1 '</td><td>' &amp; '</td><td>Bc<sup>·</sup></td></ci>		1 '	' & '	Bc <sup>·</sup>
Gi WWYggZl``Ci HWta Yg`fG\Y`HYf`UbX` <ci g]b[ł<="" td=""><td>Ι.</td><td>+) .</td><td>* '</td><td>M∕g<sup>·</sup></td></ci>	Ι.	+) .	* '	M∕g <sup>·</sup>
Gi WWggZi` <ci g]b['ci="" hwta="" td="" yg'<=""><td>٠.</td><td>&amp;%<sup>·</sup></td><td>&amp;' ·</td><td>M/g<sup>·</sup></td></ci>	٠.	&% <sup>·</sup>	&' ·	M/g <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg''<=""><td>Ι.</td><td>)) .</td><td>+&amp;`</td><td>M/g<sup>·</sup></td></ci>	Ι.	)) .	+&`	M/g <sup>·</sup>
I gU[Y'cZ7G6'8]fYVVn7`]Ybh5gg]gHJbVVV&(	Ι,	B#5 <sup>-</sup>	&* ·	B#5 <sup>-</sup>
FYVJKJj ]ga '	1	O%\$ ·	( .	M/g <sup>·</sup>
DUgg Dfc[fUa '7Yff]Z]Wlh]cb''		DUgg:7YfhjZjWUhjcb:	Bcb!7ca d`]Ubh	Bc <sup>·</sup>

&A cb]hcfYXžVi hibchYj U'i UhYX/\ck Yj Yfžth\]g WUb ]a dUWrich\Yf gi WWgg a YUgi fYg"

ˈ<ciːg]b[ˈciːhWta YgːfdYfa UbYbhUbXˈhfUbg]hjcbUːŁYlˈdfYggYXˈUgˈi ˈczŪ`ˈgiːWwyggzī ˈciːhWta Yg''

<sup>\*</sup>Dfc[fUa bchZ bXYX Vm7G6"

<sup>(&</sup>lt;ci gY\c`Xg'h\Uh`\UX`U'gi WWggZi``\ci g]b['ci hWta Y'k]h\ci hh\Y`Ugg]ghUbW'cZ875'kYfY'YIWIXYX`Zfca 'h\Y`WJW\Uh]cb"</p>

7UhY[cfm Ci hYUW\ Dfc[fUa gi 5[YbWn Gci h\YUghž ≠bW)

Dfc[fUa." D5H<%

DYf]cX. +#/#/- ! '%# %#%- '

DYfZcfa UbW. A YX]i a

HNY Dfc YVMg Zcf Sgg]gHUbW ]b HfUbg]h]cb Zfca <ca Y YggbYgg fD5Hk Łdfc[fUa `\Ug`VYYb dUfh cZGci h\YUghž & WMg gYfj ]W g hc dYfgcbg Yl dYf]YbW]b[ `\ca Y YggbYgg g]bW '%, \* "'H\Y HUf[Yh dcdi `Uh]cb ]g ]bX]j ]Xi U'g k ]h\ gYj YfY a YbHU`]`bYggž Ug k Y``Ug ]bX]j ]Xi U'g k ]h\ Wt!cWW ff]b[ gi VgHUbW i gY X]gcfXYfgžk \c UfY \ca Y Ygg cf Uhf]g\_cZVYWta ]b[ `\ca Y Ygg" D5Hk ]g U Wta a i b]hn!VUgYX ci hfYUW dfc[fUa h\Uhdfcj]XYg a YbHU`\YU'h\ gYfj ]W g UbX Zc``ck !i d WUgY a UbU[Ya Ybhcb h\Y ghfYYhgž`UbXžUbX]b`\ca Y Ygg g\Y`hYfg k ]h\ h\Y i`ha UhY [cU`cZ WtbbYW]b[ ]bX]j ]Xi U'g hc a U]bghfYUa a YbHU`\YU'h\ gYfj ]Wg UbX \ci g]b["H\Y D5Hk Dfc[fUa XY`]j Yfg ]hggYfj ]Wg ]b h\Y Wta a i b]hmZfca 'U'a cX]ZYX FJ "H\Y hYUa j ]g]hgg\Y`hYfgž gci d \_]hWYbgžUbX ch\Yf d`UW'g k\YfY`\ca Y Ygg dYfgcbg Wtb[fY[UhY UbX gYYd" & UXX]h]cb hc j ]g]h]b[ ]XYbh]ZYX g]hYgž D5Hk U'gc fYgdcbXg hc i f[YbhfYei Yghg Zfca 'g\Y`hYfgž`Uk YbZcfWa YbhžVi g]bYggž Wf[nžUbX a YX]WU`Ybh]h]yg" H\Y dfc[fUa 'gHUfhYX dUfh]V]dUh]cb ]b 7c`i a Vi g GYfj ]WDc]bh]b >i bY &\$%("``

#### Dfc[fUa 'Ci hwca Y 5Wk]Yj Ya Ybh+#%#% 'hc' %&# %#% . 'Ci hfYUWk Dfc[fUa g'

A YUgi fY		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!Ubbi U' 5Whi U'	5 <b>VN</b> ]Yj YX <sup>.</sup>
7Uffncj Yf' <ci gy\c`xg'gyfj="" td="" yx&'<=""><td>٠,</td><td>'\$'</td><td>&amp;- ·</td><td>B#5<sup>-</sup></td></ci>	٠,	'\$'	&- ·	B#5 <sup>-</sup>
BYk <ci gy\c`xg'gyfj="" td="" yx<=""><td>٠.</td><td>+\$.</td><td>%( &amp; `</td><td>M/g<sup>·</sup></td></ci>	٠.	+\$.	%( & `	M/g <sup>·</sup>
<ci gy\c`xg'gyfj="" td="" yx<=""><td></td><td>%\$\$<sup>*</sup></td><td>%+%<sup>·</sup></td><td>M/g<sup>-</sup></td></ci>		%\$\$ <sup>*</sup>	%+% <sup>·</sup>	M/g <sup>-</sup>
91 ]hYX' <ci gy\c`xg&'<="" td=""><td>٠,</td><td>+\$`</td><td>%/- ·</td><td>B#5<sup>-</sup></td></ci>	٠,	+\$`	%/- ·	B#5 <sup>-</sup>
Gi WWggZi `Ci KWta YgfG\Y`hYf'UbX' <ci g]b[ł<="" td=""><td></td><td>')</td><td>%( '</td><td>Bc<sup>·</sup></td></ci>		')	%( '	Bc <sup>·</sup>
Gi WWggZi ``Ci HWta Yg`fG\Y`HYf`UbX` <ci g]b[ł'<="" td=""><td>1</td><td>) \$</td><td>%&amp;<sup>·</sup></td><td>Bc<sup>·</sup></td></ci>	1	) \$	%& <sup>·</sup>	Bc <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" lwta="" td="" yg'<=""><td>٠,</td><td>B#5<sup>-</sup></td><td><b>%</b>.</td><td>B#5<sup>-</sup></td></ci>	٠,	B#5 <sup>-</sup>	<b>%</b> .	B#5 <sup>-</sup>
Gi WWggZi`` <ci g]b['ci="" lwta="" td="" yg'<=""><td>1 .</td><td>B#5<sup>-</sup></td><td>* '</td><td>B#5<sup>-</sup></td></ci>	1 .	B#5 <sup>-</sup>	* '	B#5 <sup>-</sup>
FYVIJX]j ]ga '	1	B#5 <sup>-</sup>	% .	B#5 <sup>-</sup>
DUgg Dfc[fUa '7Yft]ZJWlt]cb''		DUgg WfhjZjwJhjcb	7ca d`]Ubh	M/g <sup>-</sup>

&A cb]hcfYXžVi hibchYj U'i UhYX/\ckYj Yfžih\]g\Wb]a dUWfich\Yf'gi WWgg'a YUgi fYg''

(+

<sup>%</sup>Dfc[fUa bchZ bXYX Vm7G6"

<sup>&#</sup>x27;H\Y'[cU'cZD5Hk']g'hc'ci hfYUW\'hc\ca Y'Ygg'flcf'Uhf]g\_cZVYWta ]b['\ca Y'Yggk']bX]j ]Xi U'g'Zcf'h\Y'di fdcgY'cZ`]b\_]b['h\Ya'hc'cb[c]b['a YbhU'\YU'h\'UbX'ch\Yf'hfYUha Ybh'

: M&\$&\$ 'Dfc[fUa '9j U'i Uh]cb'

# FUd]X'FY!\cig]b[

**7UhY[cfm** FUd]X:FY!\ci g]b[

5[YbWm 7ca a i b]mrG\Y'hYf 6cUfX

Dfc[fUa." HfUbg]hjcb Dfc[fUa fG]b['Y 5Xi 'hg UbX: Ua]']YgŁ

DYf]cX. +#%#% ! %&# %#% '
DYfZcfa UbW'. A YX]i a #A YX]i a

7G6 UXa ]b]ghYfg'8]fYVN7]Ybh5gg]ghUbW'Z bXg'h\fci [\'h\Y'HfUbg]h]cb Dfc[fUa 'Zcf'\ca Y'Ygg']bX]j ]Xi U'g'UbX'ZUa ]']Yg'a cj ]b[ ']bhc'dYfa UbYbh\ci g]b[ "'7']Ybhg'gYfj YX ]b Ya Yf[YbWrg\Y'h\f' cf'VmghfYYhci hfYUW 'U[YbV]Wg']b: fUb\_]b 7ci bhm'UfY 'UV'Y hc 'Udd'm'Zcf'g\cfhhYfa 'fYbhU' Ugg]ghUbW'zi h]']hmXYdcg]hgz'UbX'ch\Yf'Y'][ ]V'Y'Yl dYbgYg'fY`UhYX'hc 'gYVVf]b[ 'UbX'ghUV]']n]b[ \ci g]b[ "'H\Y'HfUbg]h]cb Dfc[fUa 'U'gc dfcj ]XYg'Ugg]ghUbW'hc ]bX]j ]Xi U'g'UbX'ZUa ]']Yg'a cj ]b[ hc gi Vg]X]nYX'\ci g]b[ "''

#### Dfc[fUa 'Ci h/vta Y'5vx]Yj Ya Ybh+#%#% 'hc'%&#' %#% . FUd]X'FY!\ci q]b['fG]b['Y'5Xi 'hqt'

A YUgi fY <sup>.</sup>		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!UbbiU' 5 <b>Vh</b> iU'	5 <b>W</b> (]Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" td="" yx``<=""><td>٠</td><td>))\$</td><td>' \$- '</td><td>Bc<sup>·</sup></td></ci>	٠	))\$	' \$- '	Bc <sup>·</sup>
Gi WWggZi `` <ci 'ci="" g]b[="" hwta="" td="" yg''<=""><td>٠</td><td>)'-'</td><td>&amp;- &amp;<sup>·</sup></td><td>Bc<sup>·</sup></td></ci>	٠	)'-'	&- & <sup>·</sup>	Bc <sup>·</sup>
Gi WWggZi `` <ci 'ci="" g]b[="" hwta="" td="" yg''<=""><td>Τ,</td><td>- , .</td><td>- ( .</td><td>M/g<sup>·</sup></td></ci>	Τ,	- , .	- ( .	M/g <sup>·</sup>
I gU[Y'cZ7G6'8]fYVMi7`]Ybh'5gg]gHUbW'	٠.	%\$\$\$ <sup>.</sup>	_1	M/g <sup>·</sup>
I gU[Y'cZ7G6'8]fYWf7`]Ybh5gg]gHUbW'	Ι.	- , .	- ( .	M/g <sup>·</sup>
FYVJX]j ]ga '	Ι.	O%\$ ·	%) .	M/g <sup>·</sup>
DUgg Dfc[fUa '7Yfh]Z]Wh]cb'		DUgg Wfh]Z]Wh]cb	7ca d`]Ubhk]h\ 7cbX]h]cbg	M∕g <sup>·</sup>

# Dfc[fUa 'Ci hwta Y'5Wk]Yj Ya Ybh+#%#% 'hc'%&#' %#% . FUd]X FY!\ci g]b[ fi Ua ]]YgL'

A YUgi fY		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!Ubbi U' 5 <b>Vh</b> i U'	5 <b>V\</b> [Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" td="" yx''<=""><td></td><td>%\$<sup>.</sup></td><td>), .</td><td>Bc<sup>·</sup></td></ci>		%\$ <sup>.</sup>	), .	Bc <sup>·</sup>
Gi WWyggZi`` <ci g]b['ci="" hwta="" td="" yg''<=""><td></td><td>%/<sub>'</sub></td><td>) + .</td><td>Bc<sup>·</sup></td></ci>		%/ <sub>'</sub>	) + .	Bc <sup>·</sup>
Gi WWyggZi `` <ci 'ci="" g]b[="" hwta="" td="" yg''<=""><td>1</td><td>- , .</td><td>- , .</td><td>M∕g<sup>·</sup></td></ci>	1	- , .	- , .	M∕g <sup>·</sup>
I gU[Y'cZ7G6'8]fYVM7`]Ybh5gg]gHJbW'	٠.	%* \$\$ <sup>.</sup>	%) +	M∕g <sup>·</sup>
I gU[Y'cZ7G6'8]fYVM7`]Ybh5gg]gHJbW'	1	- ,	- ,	M∕g <sup>·</sup>
FYVJX]j ]ga '	1	O%\$ ·	* '	M/g <sup>-</sup>
DUgg Dfc[fUa '7Yft]Z]Wlt]cb'		DUggʻWffjZJWlfjcbʻ	7ca d`]Ubhk ]h 7cbX]hjcbg	M∕g <sup>·</sup>

# : M&\$&\$ Dfc[fUa '9| U'i Uh]cb

**7UhY[cfm** FUd]X FY!\ci g]b[

5[YbWm <ca YYgg: Ua ]]Yg: ci bXUh]cb

 Dfc[fUa ."
 F Ud]X F Y!\ci g]b[

 DYf]cX.
 +#%#% ! %&# %#%

DYfZcfa UbW. A YX]i a

<ca Y`Ygg: Ua ]]Yg: ci bXUh]cb fk: : ŁWta d`YhYX`]hg`hfUbg]h]cb Zfca 'U'g\Y`hYfa cXY`hc'U'
g\WhhYfYX`g]hYz`fUd]X`fY!\ci g]b[ a cXY`Zcf'h\Y`ZJa ]`]Yg`YI ]h]b[ 'h\Y`ZJa ]`mg\Y`hYfg`Vm
8YWfa VYf" %z\\$\%"H\]g`a cXY`]g`U`VYhhYf`UddfcUW\Zcf'ZJa ]`]Yg`hc`[U]b`gY`Zlgi ZZ]W]YbWhUbX`\ci g]b[ 'ghUV]]hm'i</pre>

H\Y ZJa ] mg\Y hYfg UggYgg UbX fYZYf ZJa ] ] Yg k \c fYei ] fY ifUbg|h]cbU gi ddcfhic gtUV] ] nY \ci g|b[ \UZhYf YI ] h]b[ h\Y g\Y hYf" < : : gi ddcfh]j Y gYfj ] Wg UfY ] b]h]UhYX k \] Y ZJa ] ] Yg UfY Un h\Y ZJa ] mg\Y hYf UbX UfY ] bhYbXYX hc Ugg]gh ZJa ] ] Yg ] b `c Wh]b[ dYfa UbYbhz UZZcfXUV Y \ci g]b[ \UbX \UWYgg]b[ \tag{7}66 \UXa ] b]ghYfYX 8] fYWf7 ] Ybh5gg]ghUbW f8 75½" 7 UgY a UbU[ Ya Ybh gYfj ] Wg Wbh]bi Y i bh] h\Y ZJa ] m\Ug UW\] y YX U gi WWggZ `\ci g]b[ ci hWa Y f] "Y "zgi ZZNYbh \ci gY\c`X ] bWa Y ]g Uj U] \UV Y hc UZZcfX \ci g]b[ \z h\Y ZJa ] mUW\] y YX h\Y]f [ c U gz UbX `\b\_U[ Y k ] h\ gi ddcfh]j Y gYfj ] Wg ] b h\Y Wa a i b] mcWW fg" < : : gYfj ] Wg UfY g\cfh hYfa z hnd] WI`mZcfi d hc \%\$\$ XUng" < : : U gc c ZZYfg YXi \Wh]cbU` UbX fYWfYUh]cbU` UWf[j] ] h] Yg Zcf \W] XfYb Uhh\Y 8ck X 9Xi \Wh]cb 7YbhYf"

#### Dfc[fUa Ci hwta Y 5Wk]Yj Ya Ybh+#%#% hc %&# %#% . FUd]X FY!\ci g]b[

A YUgi fY		GYa ]lUbbi Ư˙ ; cƯ˙	GYa]!Ubbi U` 5 <b>Vhi</b> U`	5 <b>W</b> ]Yj YX <sup>.</sup>
7Uffncj Yf' <ci gy\c`xg'gyfj="" td="" yx%'<=""><td></td><td>( * ·</td><td>(, .</td><td>B#5<sup>·</sup></td></ci>		( * ·	(, .	B#5 <sup>·</sup>
BYk ' <ci gy\c`xg'gyfj="" td="" yx'<=""><td>·</td><td>_ 1 · ·</td><td>, ) .</td><td>M/g<sup>·</sup></td></ci>	·	_ 1 · ·	, ) .	M/g <sup>·</sup>
<ci gy\c`xg'gyfj="" td="" yx'<=""><td>,</td><td>% - '</td><td>%''</td><td>M/g<sup>·</sup></td></ci>	,	% - '	%''	M/g <sup>·</sup>
9l]hYX´ <cigy\c`xg%`< td=""><td>,</td><td>-1.1</td><td>* * '</td><td>B#5<sup>·</sup></td></cigy\c`xg%`<>	,	-1.1	* * '	B#5 <sup>·</sup>
5j YfU[Y`@Yb[h\`cZG\Y`hYf`GhUm	8Ung <sup>r</sup>	&, .	( & ·	Bc <sup>·</sup>
5j YfU[Y@Yb[h\cZDUff]V]dUh]cb	8Ung <sup>r</sup>	%\$\$ <sup>.</sup>	, - '	M/g <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>·</td><td>, ( `</td><td>(* '</td><td>Bc<sup>·</sup></td></ci>	·	, ( `	(* '	Bc <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>1</td><td>- \$ .</td><td>+\$.</td><td>Bc<sup>·</sup></td></ci>	1	- \$ .	+\$.	Bc <sup>·</sup>
FYVJX]j ]ga '	1 '	O%\$ ·	( .	M/g <sup>·</sup>
I gU[Y'cZ7G6'8]fYWn7`]Ybh 5gg]ghUbW%	1 .	- \$	) - '	Bc <sup>·</sup>
I gU[Y'cZ7G6'8]fYWn7`]Ybh 5gg]ghUbW	• .	, \$\$	+%\$`	M∕g <sup>·</sup>
<ci '5zzcfxuv]`]kmuh9l="" ]h<="" g]b[="" td=""><td>1</td><td>) \$ .</td><td>&amp;, ·</td><td>Bc<sup>·</sup></td></ci>	1	) \$ .	&, ·	Bc <sup>·</sup>
DUgg Dfc[fUa '7Yft]ZJWJt]cb''		DUgg'WfhjZjVWhjcb'	7ca d`]Ubhk]h\ 7cbX]h]cbg	M/g <sup>·</sup>

<sup>%</sup> A cb]hcfYXžVi hbchYj U'i UhYX/\ck Yj Yfžh\]g WWb ]a dUWhch\Yf gi WWgg a YUgi fYg"

<:: i FUd]X:FY!\ci g]b[

) \$

<sup>&</sup>amp;`<ci gY\c`Xg`h\Uh`\UX`U`gi WWggZi``\ci g]b[`ci hWta Y`k`]h\ci hh\Y`Ugg]grUbW`cZ875`kYfY`Yl Wl XYX`Zfca `h\Y`Wu`W`Uf]cb"` ``%\ci gY\c`X`k`]h\``\$`]bWta Y`UbX``\$`fYbhUhYl]hkUg`Yl Wl XYX`Zfca `WUW`Uf]cb"'&`\ci gY\c`Xg`kYfY`Yl Wl XYX`Zfca `h\Y` a YUgi fY`Xi Y`hc`]bWta d`YhY`XUhU"`



**7UhY[cfm** FUd]X:FY!\cig]b[

5[YbWm <ca YYgg: Ua ]]Yg: ci bXUh]cb

DYfZcfa UbW. ... B#5%

GHJfrijb[]b: M&\$&\$z<ca YYgg: Ua]]Yg: ci bXUhjcb fk:: ŁUXXYX'U'fUd]X!fY\ci g]b['dfc[fUa XYX]WIhYX'gdYVJZJWI'mhc nci h\'U[Yg'% !&(zi g]b['<l 8 kg Nci h\ <ca Y'YggbYgg'8Ya cbghfUhjcb Dfc[fUa flM&8DŁZ bXg"H\Y'75FF'hYUa 'UbX'g\Y'hYfg'UggYgg'UbX'fYZYf'g]b['Y'nci h\ UbX'nci h\!\\YUXYX'ZUa]]Yg'k\c fYei]fY'hfUbg]hjcbU' gi ddcfhhc gYW'fY 'UbX'ghUV]]nY\ci g]b['"<:: gi ddcfhjj Y'gYfj ]Wg'UfY']b]hjlhYX'k\]Y'W]Ybhg'UfY' bg\Y'hYfYX'cf']b g\Y'hYfYUbX'UfY']bhYbXYX'hc 'Ugg]gh]b 'cWIhjb['dYfa UbYbhz'UZCfXUV'Y\ci g]b['UbX'UWW'gg]b['7G6'UXa]b]ghYfYX'8]fYVh7']Ybh 5gg]ghUbW'f875L"7UgY'a UbU[Ya YbhgYfj]W'g'Wbhjbi Y'i bhj\'h\Y'W]Ybh\Ug'UW\]Yj YX'U' gi WW'ggZ `\ci g]b['ci hWa Y'f]"Y'zgi ZZJVJYbh\ci gY\c'X']bWa Y']g'Uj Uj'UV'Y hc'UZCfX'\ci g]b['Łz' WJYbhgYh[cu'g'UfY'UW\]Yj YXz'UbX`]b\_U[Yk]h\ gi ddcfhjj Y'gYfj]Wyg']b'h\Y'Wa a i b]mcWW'fg"

# Dfc[fUa 'Ci hWta Y'5W\]Yj Ya Ybh+#%#% 'hc'%&# %#% . FUd]X FY!\ci g]b['

A YUgi fY		GYa ]!Ubbi ປົ΄ ; cປົ΄	GYa]!Ubbi U` 5 <b>Wi</b> U`	5 <b>W</b> (]Yj YX
7Uffncj Yf` <ci gy\c`xg`gyfj="" th="" yx&`<=""><th>٠</th><th>B#5<sup>-</sup></th><th>\$.</th><th>B#5<sup>-</sup></th></ci>	٠	B#5 <sup>-</sup>	\$.	B#5 <sup>-</sup>
BYk <ci gy\c`xg'gyfj="" td="" yx<=""><td>٠.</td><td>B#5<sup>-</sup></td><td>* &amp; `</td><td>B#5<sup>-</sup></td></ci>	٠.	B#5 <sup>-</sup>	* & `	B#5 <sup>-</sup>
<ci gy\c`xg`gyfj="" td="" yx`<=""><td></td><td>B#5<sup>-</sup></td><td>* &amp; '</td><td>B#5<sup>-</sup></td></ci>		B#5 <sup>-</sup>	* & '	B#5 <sup>-</sup>
9I]hYX´ <ci gy\c`xg%<="" td=""><td></td><td>B#5<sup>-</sup></td><td>%.·</td><td>B#5<sup>-</sup></td></ci>		B#5 <sup>-</sup>	%.·	B#5 <sup>-</sup>
5j YfU[Y'9b[U[Ya YbhH]a Y('	8Ungi	B#5 <sup>-</sup>	&&`	B#5 <sup>-</sup>
5j YfU[Y@Yb[h\cZG\Y`hYf`GhUm	8Ungi	B#5 <sup>-</sup>	' + '	B#5 <sup>-</sup>
5j YfU[Y@Yb[h\cZDUfh]V]dUh]cb	8Ungi	B#5 <sup>-</sup>	) %	B#5 <sup>-</sup>
Gi WWggZi `` <ci 'ci="" g]b[="" lwta="" td="" yg'<=""><td>٠</td><td>B#5<sup>-</sup></td><td>&amp;`</td><td>B#5<sup>-</sup></td></ci>	٠	B#5 <sup>-</sup>	&`	B#5 <sup>-</sup>
Gi WWggZi `` <ci 'ci="" g]b[="" lwta="" td="" yg'<=""><td>Ι,</td><td>- \$ `</td><td>%+ ·</td><td>Bc<sup>·</sup></td></ci>	Ι,	- \$ `	%+ ·	Bc <sup>·</sup>
FYV[K]j]ga	Ι.	0%\$	B#5 <sup>-</sup>	B#5 <sup>-</sup>
-a dfcjYX'D\mg]WU` <yu`h\ghuhig'< td=""><td>Ι,</td><td>B#5<sup>-</sup></td><td>\$.</td><td>B#5<sup>-</sup></td></yu`h\ghuhig'<>	Ι,	B#5 <sup>-</sup>	\$.	B#5 <sup>-</sup>
∍a dfcj YX'Gi VghUbWr'5Vi gY'GhUhi g'	Ι.	B#5 <sup>-</sup>	\$.	B#5 <sup>-</sup>
∍a dfcj YX`A YbhU` <yu`h\ g`<="" ghuhi="" td=""><td>Ι.</td><td>B#5<sup>-</sup></td><td></td><td>B#5<sup>-</sup></td></yu`h\>	Ι.	B#5 <sup>-</sup>		B#5 <sup>-</sup>
9Xi VVInjcb; cU`A Yh	Ι.	B#5 <sup>-</sup>	( & ·	B#5 <sup>-</sup>
9a d'cma Ybh; cU'A Yh	Ι.	B#5 <sup>-</sup>	\$.	B#5 <sup>-</sup>
±bWca Y'; fck h\	Ι.	B#5 <sup>-</sup>	%+ ·	B#5 <sup>-</sup>
I gU[YcZ7G68]fYVM7]Ybh5gg]gHUbW	Ι.	B#5 <sup>-</sup>	\$.	B#5 <sup>-</sup>
I gU[Y'cZ7G6'8]fYVM7`]Ybh5gg]gHUbW	٧.	B#5 <sup>-</sup>	\$.	B#5 <sup>-</sup>
±bWfYUgY]bWlg\]bWlcaYflch\YfTh\Ub Yad`cnaYbHzZfcaYbHmhcYl]h	1 .	' \$ <sup>·</sup>	\$.	Bc <sup>·</sup>
±bWfYUgY]b]bWca YZfca Ya d`cna Ybhž Zfca YbhfmhcYl]h	1 .	% .	%+ ·	M/g <sup>-</sup>
<ci 5zzcfxuv]]hmuh9l]h<="" g]b[="" td=""><td>Ι.</td><td>) \$ '</td><td>B#5<sup>-</sup></td><td>B#5<sup>-</sup></td></ci>	Ι.	) \$ '	B#5 <sup>-</sup>	B#5 <sup>-</sup>
DUgg Dfc[fUa '7Yfh]ZJ\Wh]cb''		DUgg Wfh]Z]Wh]cb	B#5 <sup>-</sup>	B#5 <sup>·</sup>

<sup>%&</sup>quot;Dfc[fUa 'hcc'bYk hc'VY'Yj U'i UhYX""

& A cb]hcfYXžVi hbchYj U'i UhYX/\ckYj Yfžh\]g VVIb ]a dUVMch\Yf gi VVVgg a YUgi fYg"

-

ˈ<ci gY\c`Xgʻh\Uh\UXʻUʻgi WWggZi ``\ci g]b[ˈci lWta Yˈk]h\ci hh\YʻUgg]gHJbWrcZ875'k YfY'Yl Wl XYX'Zfca 'h\Y'WlW\'Uh]cb"'

<sup>(&#</sup>x27;A YUgi fy'Wti 'X'bchVy'WtW'Wl'Wl'\YX'Xi Y'hc']bWta d'Yhy'XUhU"'

<sup>( %</sup> W)Ybhg k YfY Yl Wl XYX Xi Y hc bc cj Yf Udd]b[ \ca Y Ygg gYfj ]Wyg'''

# : M&\$&\$ Dfc[fUa '9; Ui Uhjcb'

**7Uh/[cfm** FUd]X FY!\ci g]b[

5[YbWhn @ h\YfUb GcV]U GYfj ]Wyg

Dfc[fUa." GGJ: fGi ddcfhji Y GYfj [Wg Zcf J YhYfUb: Ua ] [YgŁF Ud]X F Y!\ci g]b[%]

DYf]cX. +#%#% ! %&#' %#%

DYfZcfa UbW. A YX]i a

Cb CWcVff % & \$% z@ h. YfUb GcVJU GYfj ]Wg#. U]h. A ]gg]cb f@G#: A ŁVY[ Ub ]a d'Ya Ybh]b[ h. Y GGJ: Dfc[ fUa "H.Y ]bhYbhcZh.]g ZYXYfU`mZ bXYX dfc YVh]g hc dfca chY \ci g]b[ ghU/] ]m Ua cb[ j Yfmck!]bWta Y J YhYfUb ZJa ] ]Yg k \c fYg]XY ]b cf UfY hfUbg]h]cb]b[ hc dYfa UbYbh \ci g]b[ "H. ]g dfc[ fUa 'hUf[ Yhg J YhYfUbg YI dYf]YbVJb[ \ca Y YggbYgg" J YhYfUb ZJa ] ]Yg UfY XYZ]bYX Ug Vch. U g]b[ `Y j YhYfUb UbX h.Y j YhYfUb UbX \]g#\Yf ZJa ] ma Ya VYfg k ]h. k \ca g#\Y fYg]XYg" 9UM J YhYfUb fYW]j Yg gYfj ]Wg ]bWi X]b[ žVi hbch`]a ]hYX hcžci hfYUWžWUgY a UbU[ Ya Ybhz Ugg]ghUbW ]b cVhU]b]b[ J 5 VYbYZ]hgz UbX hYa dcfUfmZ]bUbVJU `Ugg]ghUbW'" H.Y XYZ]b]h]cb cZh\Y J YhYfUb ]g VfcUX Zcf h\YgY dfc[ fUa g" 5 j YhYfUb ]g UbncbY k \c` \Ug gYfj YX UMJj Y`m]b h\Ya ] ]hUfmzbUj UʻzU]f gYfj ]WžA YfWUbhA Uf]bYgzcf k Ug UMJj UhYX VmDfYg]XYbh]U cfXYf UbX gYfj YX ]b Ubch\Yf ghUhY cf Wti bhfmk \]Y ]b h\Y BUh]cbU`; i UfX cf F YgYfj Yg" H\fYY VUg]WY`][ ]V] ]hmWf]hYf]cbg Zcf h\Y dfc[ fUa 'UfY '%£ [ fcgg Ubbi U`\ci gY\c`X ]bWta Y`Ygg h\Ub ) \$1 cZh\Y UfYUa YX]Ub ]bWta Y`Zcf \ci gY\c`X g]nY &£`]hYfU`m\ca Y`Ygg" Łbc ch\Yf fYgci fWgcf gcVJU` gi ddcfhg UfY WffYbhm]b d`UW" @GG#. A ]g df]a Uf] mgYfj ]b[ g]b[ Y`UXi `hg"

# Dfc[fUa 'Ci hwta Y 5Wk]Yj Ya Ybh+#%#% 'hc '%&# %#% . FUd]X FY!\ci g]b['

A YUgi fY		GYa ]lUbbi Ư˙ ; cƯ˙	GYa]!Ubbi U` 5 <b>Vh</b> i U`	5 <b>VN</b> ]Yj YX <sup>.</sup>
7Uffncj Yf' <ci gy\c`xg'gyfj="" th="" yx&'<=""><th></th><th>' \$<sup>·</sup></th><th>% .</th><th>B#5<sup>-</sup></th></ci>		' \$ <sup>·</sup>	% .	B#5 <sup>-</sup>
BYk ' <ci gy\c`xg'gyfj="" td="" yx'<=""><td></td><td>)).</td><td>( %</td><td>Bc<sup>·</sup></td></ci>		)).	( %	Bc <sup>·</sup>
<ci gy\c`xg'gyfj="" td="" yx'<=""><td></td><td>, ) .</td><td>)</td><td>Bc<sup>·</sup></td></ci>		, ) .	)	Bc <sup>·</sup>
9I]h/X' <ci gy\c`xg&'<="" td=""><td>٠,</td><td>)).</td><td>1 · ·</td><td>B#5<sup>-</sup></td></ci>	٠,	)).	1 · ·	B#5 <sup>-</sup>
5j YfU[Y'@Yb[h\'cZG\Y`hYf'GhUm'	8Ungi	&) ·	' + '	Bc <sup>·</sup>
5j YfU[Y'@Yb[h\'cZDUfh]VljdUh]cb'	8Ungi	%\$\$ <sup>.</sup>	, ) .	M/g <sup>-</sup>
Gi WWggZi`` <ci g]b['ci="" lwta="" td="" yg'<=""><td></td><td>(('</td><td>'\$'</td><td>Bc<sup>·</sup></td></ci>		(('	'\$'	Bc <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" lwta="" td="" yg'<=""><td>1 '</td><td>, \$</td><td>+</td><td>M/g<sup>-</sup></td></ci>	1 '	, \$	+	M/g <sup>-</sup>
FYVJjK]j ]ga '	1 '	O%\$ ·	%% <sup>.</sup>	M/g <sup>-</sup>
I gU[Y'cZGGJ: '8]fYVVi7`]Ybh5gg]grUbW	1	, \$	+*.	M/g <sup>-</sup>
DUgg Dfc[fUa '7Yfh]Z]Wh]cb''		DUgg Wfh]Z]Wh]cb	7ca d`]Ubhk]h\ 7cbX]h]cbg	M/g <sup>-</sup>

& A cb]hcfYXžVi hbchYj U'i UhYX/\ckYj Yfžh\]g VVIb ]a dUVMch\Yf gi VVVgg a YUgi fYg"

@GG'l GGJ: FUd]XFY!\ci q]b[

) &

<sup>%</sup> Dfc[fUa bch2 bXYX Vm7G6"

<sup>``+`\</sup>ci gY\c`Xg`k YfY`Yl Wl XYX`Xi Y`hc<sup>\*</sup>gh]``fYgJX]b[`]b`Ya Yf[ YbWhg\Y`hYr̃`cf`h\Y`J CŠC≟J YhYfUbg`Dfc[ fUa `Uhih\Y`YbX`cZh\Y` fYdcfh]b[`dYf]cX"" `\ci gY\c`Xg`k YfY`Yl Wl XYX`VYWli gY`\ci gY\c`X`X]X`bch\Uj Y`U`\ca Y`Ygg`dfc[ fUa `cj Yf`Ud`Uhdfc[ fUa ` Yblfm"



 7UhY[cfm]
 F Ud]X FY!\ci g]b[

 5[YbWn]
 H\Y GU'j Uhjcb 5fa m

 Dfc[fUa.
 F Ud]X FY!\ci g]b[

 DYf]cX.
 +#%#% ! %&# %#%

DYfZcfa UbW. A YX]i a

H\Y GU j Uhjcb 5fa mF Ud]X F Y!\ci g]b[ dfc[fUa Ugg]ghg ZJa ]]Yg ghUnjb[ UhU ZJa ] mg\Y hYf k ]h\ cVhU]b]b[ UbX a U]bhU]b]b[ dYfa UbYbh\ci g]b[ "H\Y ZJa ] mg\Y hYfg UggYgg UbX fYZYf ZJa ]]Yg k \c fYei ]fY hfUbg]h]cbU gi ddcfhhc ghUV]]nY \ci g]b[ UZhYf YI ]h]b[ h\Y g\Y hYf" F Ud]X fY!\ci g]b[ dfc[fUa gi ddcfh]j Y gYfj ]Wg UfY ]b]h]UhYX k \] Y ZJa ]]Yg UfY Uhh\Y ZJa ] mg\Y hYfg UbX UfY ]bhYbXYX hc Ugg]ghZJa ]]Yg ]b `cWh]b[ dYfa UbYbhz UZZcfXUV Y \ci g]b[ k ]h\]b h\fYY k YY\_g cZfYZYffU" Hc UWXa d`]g\ h\]gz F Ud]X F Y!\ci g]b[ dfc[fUa WJgY a UbU[Yfg Ugg]gh ZJa ]]Yg k ]h\ Z]bX]b[ gi ]hUVY UbX UZZcfXUVY \ci g]b[ UbX `]b\_]b[ ZJa ]]Yg hc 7G6 UXa ]b]ghYfYX 8]fYWh7]Ybh5gg]ghUbW f875½" 7UgY a UbU[Ya YbhgYfj ]Wg WbhJbi Y i bh]`h\Y ZJa ]m\Ug UW\ggZ `\ci g]b[ ci hWa Y f]"Y"zgi ZZ]W]Ybh\ci gY\c`X ]bWa Y ]g Uj U]`UVY hc UZZcfX \ci g]b[ ½z ]b\_U[Y k ]h\ gi ddcfh]j Y gYfj ]Wg ]b h\Y Wa a i b]hmcWW fgz UbX#cf h\Y ZJa ]m\Ug YbXYX WbhUWH h\Y GU j Uh]cb 5fa n\y dfc[fUa dfcj]XYg g\cfhhYfa qYfi ]Wg hnd]WU`mZcf i d hc %\$\$ XUnq""

Dfc[fUa Ci hwta Y 5Wx]Yj Ya Ybh+#%#% hc %&# %#% . FUd]X FY!\ci q]b[ '

A YUgi fY		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!Ubbi U' 5 <b>Vh</b> i U'	5W(]Yj YX <sup>.</sup>
7Uffmcj Yf' <ci gy\c`xg'gyfj="" td="" yx%'<=""><td>٠</td><td>' + '</td><td>&amp;\$ ·</td><td>B#5<sup>·</sup></td></ci>	٠	' + '	&\$ ·	B#5 <sup>·</sup>
BYk ' <ci gy\c`xg'gyfj="" td="" yx'<=""><td>٠</td><td>1</td><td>, \$</td><td>M/g<sup>-</sup></td></ci>	٠	1	, \$	M/g <sup>-</sup>
<ci gy\c`xg'gyfj="" td="" yx'<=""><td></td><td>%&amp;\$ <sup>·</sup></td><td>%\$\$<sup>.</sup></td><td>Bc<sup>·</sup></td></ci>		%&\$ <sup>·</sup>	%\$\$ <sup>.</sup>	Bc <sup>·</sup>
9I ]hYX ' <ci gy\c`xg%'<="" td=""><td>٠</td><td>1</td><td>) * ·</td><td>B#5<sup>·</sup></td></ci>	٠	1	) * ·	B#5 <sup>·</sup>
5j YfU[Y@Yb[h\cZG\YhYfGhUm	8Ungi	&, .	( %	Bc <sup>·</sup>
5j YfU[Y`@Yb[h\`cZDUfh]V]dUh]cb`	8Ungi	%\$\$ <sup>.</sup>	+\$.	M/g <sup>·</sup>
Gi WWyggZi`` <ci g]b['ci="" td="" wta="" yg'<=""><td></td><td>+) .</td><td>')</td><td>Bc<sup>·</sup></td></ci>		+) .	')	Bc <sup>·</sup>
Gi WWyggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>1.</td><td>- \$ .</td><td>*! '</td><td>Bc<sup>·</sup></td></ci>	1.	- \$ .	*! '	Bc <sup>·</sup>
FYVIJX]j]ga	1 '	O%\$ ·	%%	M/g <sup>-</sup>
I gU[YcZ7G6'8]fYWn7`]Ybh 5gg]gHJbW <sup>a</sup>	1 .	- \$`	(, .	Bc <sup>·</sup>
I gU[Y'cZ7G6'8]fYWn7`]Ybh 5gg]gHUbW'	•	% \$\$ <sup>.</sup>	% \$- <sup>·</sup>	M∕g <sup>·</sup>
<pre><ci '5zzcfxuv]`]hmuh'9i="" '<="" ]h="" g]b[="" pre=""></ci></pre>	1	) \$ .	*! '	M/g <sup>·</sup>
DUgg:Dfc[fUa :7Yfh]Z]WUh]cb::	-	DUgg Wfh]Z]Wh]cb	7ca d`]Ubhk ]h\ 7cbX]h]cbg	M∕g <sup>·</sup>

%A cb]hcfYXžVi hbchYj U'i UhYX/\ck Yj Yfžh\]g\Wb']a dUWrich\Yf'gi WWgg'a YUgi fYg''

) '

H\Y'GU'j Uhlcb 5fa mi FUd]X'FY!\ci q]b[

<sup>&</sup>amp;'<ci gY\c'Xg'h\Uh\UX'U'gi WWggZi ``\ci g]b[ ci hWta Y'k]h\ci h'h\Y'Ugg]gHUbW'cZ875'kYfY'YI WI XYX'Zfca 'h\Y'WJW\'Uh]cb"</p>
'; '\ci gY\c'X'k]h\` \$ ]bWta Y'UbX` \$ fYbhUhYI]hkUg'YI WI XYX'Zfca 'WJW\'Uh]cb"

# : M&\$&\$ Dfc[fUa '9] U'i Uhcb'

7UhY[cfm FUd]X:FY!\cig]b[ 5[YbWn H\Y:GU'j Uh]cb 5fa m

DYf]cX. +#%#% ! %&# %#%

DYfZcfa UbW. · · <][\

H\Y >cV&<ci g]b[ dfc[fUa YbXYX]rgrh\fYY!mYUfd]chd\UgY cb: YVfi Ufm&, ž&\$% UbX Wtbr]bi Ygrbc cdYfUhY Ug'U'fUd]X fY!\ci g]b[ dfc[fUa ZcfZJa]]Yg"H\Y dfc[fUa gYfj Yg ZJa]]Ygžk\c\Uj Y]bgi ZZJVJYbh]bVta Y rc UZZcfX'Ub'UdUfha YbhžUbX'UfY Vta a]hhYX rc di fgi ]b[ Ya d'cna Ybhrc UW\]Yj Y ZJa]mgY`Zgi ZZJVJYbWh'H\Y dfc[fUa dfcj]XYg`\ci g]b[ d'UWa Ybhž`YUg]b[ Ugg]ghUbW Zcfi d'rc \* a cbh\gžUbX Ya d'cna YbhZcVVgYX VVgY a UbU[Ya Ybh'DUfr]VJdUbhg Vta d'YhY Vta a i b]mhVUgYX cV d'UWa Ybhdfc[fUa g'h\UnfYgi h]b Ya d'cna Ybh]bVta Y gi ZZJVJYbhrc a U]bHJb]b ]bXYdYbXYbh\ci g]b[ Uhrh\Y VtbWi g]cb cZh\Y YUg]b[ Ugg]ghUbW dYf]cX"7G6 fYW]j YX U [fUbhZfca < I 8 hc ]a d'Ya Ybhrh\]g XYa cbghfUf]cb dfc[fUa žqhUfr]b[ ]b: N&\$%\$"``

GHUffnjb[: YVfi Ufm%) ž&\$%+ž×cV&<ci g]b[YIdUbXYX`gYfj]]WgcZZYfYX`hc`dfY[bUbhk ca Yb" H\Y`dfc[fUa Njg[cU`]g`hc`gYfj Y`dfY[bUbhk ca YbžZc``ck]b['h\Y`k ca Ub'h\fci [\`\Yf'dfY[bUbWh UbX`i d`hc`cbY`mYUf`UZhYf`h\Y`W\]X`]g`Vcfb"H\]g`gffUhY[m]bhYbXg`hc`UXXfYgg`h\Y`7]hmcZ7c`i a Vi g`7Y`YVfUhY`CbY`]b]hJUhjj Y`hc`fYXi WY`W]X`]bZUbha cfhU`]hmjb`ci f`VJhm'``

Dfc[fUa Ci hwta Y 5wx]Yj Ya Ybh+#%#% hc %&# %#% . FUd[X FY!\ci q]b[

A YUgi fY		GYa ]!Ubbi Ư΄ ; cƯ΄	GYa]!UbbiU' 5 <b>Vh</b> iU'	5 <b>VN]</b> Yj YX <sup>.</sup>
7Uffmcj Yf´ <ci gy\c`xg`gyfj="" th="" yx%`<=""><th></th><th>'\$'</th><th>(%</th><th>B#5<sup>-</sup></th></ci>		'\$'	(%	B#5 <sup>-</sup>
BYk ' <ci gy\c`xg'gyfj="" td="" yx'<=""><td>٠</td><td>' &amp; `</td><td>' + '</td><td>M/g<sup>-</sup></td></ci>	٠	' & `	' + '	M/g <sup>-</sup>
<ci gy\c`xg`gyfj="" td="" yx`<=""><td></td><td>* &amp; `</td><td>+, ·</td><td>M/g<sup>·</sup></td></ci>		* & `	+, ·	M/g <sup>·</sup>
9l]hYX' <cigy\c`xg%'< td=""><td></td><td>' &amp; `</td><td>' %</td><td>B#5<sup>-</sup></td></cigy\c`xg%'<>		' & `	' %	B#5 <sup>-</sup>
5j YfU[Y@Yb[h\cZG\Y`hYf`GhUm	8Ungi	&, ·	' + '	Bc <sup>·</sup>
5j YfU[Y@Yb[h\cZDUfh]V]klUh]cb&	8Ungi	% \$	%- ·	M/g <sup>-</sup>
Gi WWggZi`~ci g]b['Ci HWta Yg'		&- ·	&- ·	M/g <sup>-</sup>
Gi WWggZi`~ci g]b['Ci HWta Yg'	1	- \$ `	- ( .	M/g <sup>-</sup>
<ci '5zzcfxuv]`]hmuh'9l="" '<="" ]h="" g]b[="" td=""><td>1</td><td>) \$ .</td><td>), .</td><td>M/g<sup>-</sup></td></ci>	1	) \$ .	), .	M/g <sup>-</sup>
FYVIJX]j]ga '	1 '	O%\$ ·	%+ ·	Bc <sup>·</sup>
DfY[bUbhK ca Yb GYfj YX		+ .	' - ·	M/g <sup>-</sup>
±0.WTYUGY]b.WUg\]b.WtaYftch.Yf h.Ub.Yad`cmaYbht.ZfcaYbhfmhc Yl]h	1 .	'\$'	% ·	Bc <sup>·</sup>
±bWfYUgY]b]bW¢aYZfca Yad`cnaYbhžZfcaYbhfmhcYl]h	1	%	1	M/g <sup>·</sup>
DUgg Dfc[fUa 7Yfh]Z]WUh]cb		DUgg Wfh]Z]Wh]cb	7ca d`]Ubhk P7cbX"	M/g <sup>·</sup>

<sup>%</sup> A cb]hcfYXžVi hbchYj U'i UhYX/\ckYj Yfžh\]g WWb ]a dUWlich\Yf gi WWgg a YUgi fYg":

\_

<sup>«9)</sup> Wi XYg "Yb[h\ cZdUfh]WdUh]cb 'Zcf'dfY[bubhk ca Yb/]ZdfY[bubhk ca Yb/]ZdfY[bubhk ca Yb/]bwi XYXzh\Y'uj Yfu[Y "Yb[h\ cZdUfh]Wduh]cb ']g '%+, 'XUng'''

<sup>``&#</sup>x27;``\cigY\c`X`k YfY`YI Wi XYX`Zfca "h\Y`a YUgi fY`Xi Y`hc`]bWa d`YhY`XUHU"'



**7UhY[cfm** FUd]X:FY!\cig]b[

5[YbWm JcibhYYfgcZ5aYf]WJC\]c/ \piX]UbU

Dfc[fUa." GGJ: fGi ddcfhlj Y'GYfj ]Wrg Zcf J YhYfUb: Ua ] ] YgŁF Ud]X F Y!\ci q]b[%

DYflcX. +#%# ! %# %#%

DYfZcfa UbW." < ][\"

Cb CWcVYf % 28% žJci bhYYfgcZ5a YfJWifJC5ŁVY[Ub]a d'Ya YbhJb[ih.Y GGJ:
Dfc[fUa "H\Y]bhYbhcZh]g ZYXYfU`m bXYX dfcYVhJghc dfca chY \ci g]b[ghV]]m a cb[j Yfmck!]bWa Y JYhYfUb ZJa]]Yg k \c fYg]XY ]b cf UfY hfUbg]h]cb]b[hc dYfa UbYbh \ci g]b["H\]gdfc[fUa hUf[YhgJYhYfUbgYl dYf]YbW]b[\ca Y`YggbYgg"JYhYfUb ZJa]]Yg UfY XYZ]bYX Ug Vch Ug]b[Yj YhYfUb UbX hYj YhYfUb UbX \]g#\Yf ZJa]ma Ya VYfgk]h k \ca g#\Y fYg]XYg"9UW JYhYfUb fYW]j Yg gYfj]Wg ]bWi X]b[žVi hbch]a]hYX hc ci hYUWlžWgY a UbU[Ya YbhžUgg]ghUbW]b cVhJ]b]b[J5 VYbYZ]hgžUbX hYa dcfUfmZ]bUbV]U`Ugg]ghUbW"H\Y XYZ]b]h]cb cZh\Y JYhYfUb ]g VfcUX Zcfh\YgY dfc[fUa g"5jYhYfUb ]g UbncbYk\c`\UggYfjYX`UMJj Ym]b h\Ya] ]hUfmžbUj UžU]f gYfj]WzA YfWUbhA Uf]bYgzcfk Ug UMJj UhYX VmDfYg]XYbhJU`cfXYf UbX gYfj YX ]b Ubch\Yf ghUhY cf Wti bhfmk \]Y]b h\Y BUhJcbU`; i UfX cf FYgYfj Yg"H\fYY`VUg]WY`][]V]]mwVf]hYf]cbg Zcf h\Ydfc[fUa 'UfY % [fcgg'Ubbi U`\ci gY\c`X`]bWta Y`Ygg'h\Ub`)\$i cZh\Y5fYU'A YX]Ub \bwta Y Zcf\ci gY\c`X`g]nY & L`]hYfU`m\ca Y`Ygg' Ebc ch\Yf fYgci fWg'cf gcV]U`gi ddcfhg'UfY WfffYbhm]b d'UW""J C5]gdf]a Uf]mgYfj]b[ZJa]]Yg"

#### Dfc[fUa Ci hwta Y 5 w]Yj Ya Ybh+#% hc % # % . FUd]X FY!\ci q]b[ `

A YUgi fY <sup>.</sup>		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!UbbiU' 5 <b>VM</b> U'	5 <b>W</b> (]Yj YX <sup>.</sup>
7Uffincj Yf' <ci gy\c'xg'gyfj="" td="" yx&'<=""><td></td><td>) \$ .</td><td>+) .</td><td>B#5<sup>-</sup></td></ci>		) \$ .	+) .	B#5 <sup>-</sup>
BYk ' <ci gy\c`xg'gyfj="" td="" yx'<=""><td></td><td>%\$&amp;<sup>*</sup></td><td>%) ·</td><td>M∕g<sup>·</sup></td></ci>		%\$& <sup>*</sup>	%) ·	M∕g <sup>·</sup>
<ci gy\c`xg'gyfj="" td="" yx<=""><td></td><td>%) &amp; .</td><td>% \$</td><td>M∕g<sup>·</sup></td></ci>		%) & .	% \$	M∕g <sup>·</sup>
9l ]hYX <ci gy\c`xg&<="" td=""><td></td><td>%\$&amp;<sup>*</sup></td><td>%\$+<sup>'</sup></td><td>B#5<sup>-</sup></td></ci>		%\$& <sup>*</sup>	%\$+ <sup>'</sup>	B#5 <sup>-</sup>
5j YfU[Y'@Yb[h\'cZG\Y`hYf'GhUm'	8Ung <sup>*</sup>	&) ·	(\$'	Bc <sup>·</sup>
5j YfU[Y'@Yb[h\cZDUfh]V]dUh]cb	8Ung <sup>r</sup>	%\$\$ <sup>.</sup>	%) \$ .	Bc <sup>·</sup>
Gi WWggZi ` <ci 'ci="" g]b[="" hwta="" td="" yg'<=""><td></td><td>, &amp;</td><td>- \$ .</td><td>M/g<sup>·</sup></td></ci>		, &	- \$ .	M/g <sup>·</sup>
Gi WWggZi `` <ci 'ci="" g]b[="" hwta="" td="" yg'<=""><td>1 '</td><td>, \$</td><td>, ( '</td><td>M/g<sup>·</sup></td></ci>	1 '	, \$	, ( '	M/g <sup>·</sup>
FYVJX]j ]ga '	1 '	O%\$ ·	- '	M/g <sup>·</sup>
I gU[Y'cZGGJ: '8]fYWn7`]Ybn 5gg]gHUbW	1 .	, \$	, ) .	M/g <sup>·</sup>
DUgg:Dfc[fUa '7Yfh]ZJWJh]cb''		DUgg WfhjZWhjcb	7ca d`]Ubhk ]h\ 7cbX]hjcbg	M∕g <sup>·</sup>

& A cb]hcfYXžVi hbchYj U'i UhYX/\ckYj Yfžh\]g VWb ]a dUVhich\Yf gi WWgg a YUgi fYg"

JcibhYYfgcZ5aYf]WUIGGJ: FUd]XFY!\cig]b[

))

<sup>%</sup> Dfc[fUa bchild bXYX Vm7G6"

<sup>&</sup>quot; "%\ci gY\c`Xg'k YfY'Yl Wl XYX`VYWli gY`\ci gY\c`X`X]X`bch\Uj Y`U`\ca Y`Ygg'dfc[fUa 'cj Yf`Ud'Uhdfc[fUa 'YbHfm';%( '\ci gY\c`Xg'k YfY'Yl Wl XYX`Xi Y`hc`gh]``fYg]X]b[ ]b`Ya Yf[YbWfg\Y`hYf`cf`h\Y`JC5C=JYhYfUbg'Dfc[fUa 'Uhh\Y`YbX`cZh\Y`fYdcfh]b[ 'dYf]cX"'

# : M&\$&\$ Dfc[fUa '9| U'i Uh]cb

**7UhY[cfm** FUd]X:FY!\cig]b[

5[YbWm JcibhYYfgcZ5aYf]WJC\]c/ \dag{\text{b}X]UbU

 Dfc[fUa ."
 F Ud]X F Y!\ci g]b[

 DYf]cX.
 +#\#\% ! \%\#" \\%\#"

DYfZcfa UbW. · · <][\

Jci bhYYfgcZ5a Yf]WJfJC5EWta d`YhYX]hg'hfUbg]h]cb'Zfca 'U'g\Y'hYfa cXY`hc'U'gWJhYfYX!g]hY'fUd]XfY!\ci g]b[ a cXY`Zcf'h\Y'ZJa ]`]Yg'YI]h]b[ 'ZJa ]`mg\Y'hYfg'Vm8YWfa VYf" %2%\$%"'H\]g' a cXY`]g'U'VYhYf'UddfcUW. Zcf'ZJa ]`]Yg'hc [U]b gY`Zgi ZZ]V]YbWhUbX`\ci g]b[ 'ghUV]`]m"

H\Y ZJa ] mg\Y hYfg UggYgg UbX fYZYf ZJa ] ]Yg k \c fYei ]fY hfUbg]h]cbU gi ddcfh]b cfXYf hc ghJV] ]nY \ci g]b[ \uZhYf Yl ]h]b[ \h\Y g\Y hYf" J C5 gi ddcfh]j Y gYfj ]Wg UfY ]b]h]UhYX k \] Y ZJa ] ]Yg UfY Uhh\Y ZJa ] mg\Y hYfg UbX UfY ]bhYbXYX hc Ugg]ghZJa ] ]Yg ]b `cVVh]b[ dYfa UbYbhž UZcfXUV Y \ci g]b[ 'UbX UWVgg]b[ '7G6 'UXa ]b]ghYfYX 8]fYWh7 ]Ybh5gg]ghUbW f8752" J C5 dfcj ]XYg ZJa ] ]Yg k ]h\ VVgY a UbU[ Ya YbhžUb ]b]h]U gi dd`mcZzccX Uh]bhU\_YžWch\]b[ 'UbX gWcc` gi dd`]Ygž`]ZY g\_]`g WUggYg Zcf UXi `hgžUZhYf!gWcc` h hcf]b[ 'Zcf U``gWcc`!U[ YX \_]Xgž hUbgdcfhUh]cbžUgg]ghUbW k ]h\ UWVgg]b[ < YUX GhUfhcf W] X VVVfYž\ci g]b[ d`UWa Ybh Ugg]ghUbW žYa d`cna YbhUbX a UhYf]U `Ugg]ghUbW žUbX UWVgg hc ch\Yf Wta a i b]hmgYfj ]Wg" 7UgY a UbU[ Ya YbhgYfj ]Wg Wtbh]bi Y i bh]`h\Y ZJa ] m\Ug UW\]Yj YX U gi \WVggZ `\ci g]b[ ci hWta Y f]"Y"zgi ZZ]V]Wbh\ci gY\c`X ]bWta Y ]g Uj U]`UV Y hc UZcfX \ci g]b[ \zentif h\Y ZJa ]`m UW\]Yj YX h\Y]f [ cUg UbX `]b\_U[ Y k ]h\ gi ddcfh]j Y gYfj ]Wg ]b h\Y Wta a i b]hmcWV fg" J C5 gYfj ]Wg UfY g\cfhhYfa zhnd]WU`mzcfi d`hc %\$\$ XUng UZhYf`ci g]b[ d`UWa Ybh'`

#### Dfc[fUa 'Ci hwca Y 5 wk] Yj Ya Ybh+#%#% 'hc' %&# %#% . FUd] X FY!\ci g]b['

A YUgi fY		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!Ubbi U` 5 <b>Vh</b> i U`	5 <b>\%</b> ]Yj YX <sup>.</sup>
7Uffncj Yf' <ci gy\c`xg'gyfj="" td="" yx%'<=""><td>٠,</td><td>&amp;( .</td><td>&amp;( ·</td><td>B#5<sup>-</sup></td></ci>	٠,	&( .	&( ·	B#5 <sup>-</sup>
BYk <ci gy\c`xg`gyfj="" td="" yx<=""><td></td><td>1</td><td>' ( '</td><td>M/g<sup>·</sup></td></ci>		1	' ( '	M/g <sup>·</sup>
<ci gy\c`xg'gyfj="" td="" yx<=""><td></td><td>* &amp; .</td><td>), .</td><td>M/g<sup>·</sup></td></ci>		* & .	), .	M/g <sup>·</sup>
9I ]hYX' <ci gy\c`xg%'<="" td=""><td></td><td>1</td><td>۱ * ۱</td><td>B#5<sup>-</sup></td></ci>		1	۱ * ۱	B#5 <sup>-</sup>
5j YfU[Y@Yb[th.cZG\Y`hYf`GhUm	8Ungi	&, ·	' ( '	Bc <sup>-</sup>
5j YfU[Y`@Yb[h\`cZDUff]V]dUf]cb`	8Ungi	%\$\$ <sup>.</sup>	- ( .	M/g <sup>·</sup>
Gi WWyggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>٠,</td><td>' ( .</td><td>' %</td><td>M/g<sup>·</sup></td></ci>	٠,	' ( .	' %	M/g <sup>·</sup>
Gi WWyggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>Ι,</td><td>- \$.</td><td>* '</td><td>M/g<sup>·</sup></td></ci>	Ι,	- \$.	* '	M/g <sup>·</sup>
FYVJJX]j ]ga '	Ι.	O%\$ <sup>·</sup>	* '	M/g <sup>·</sup>
<ci '572cfxuv]`]hmuh'9l="" ]h<="" g]b[="" td=""><td>Ι.</td><td>) \$ .</td><td>++.</td><td>M/g<sup>·</sup></td></ci>	Ι.	) \$ .	++.	M/g <sup>·</sup>
I gU[Y'cZ7G6'8]fYVM7`]Ybh5gg]gHUbWV	Ι.	- \$ <sup>·</sup>	, - '	M/g <sup>·</sup>
I gU[Y'cZ7G6'8]fYVM7`]Ybh5gg]gHUbW	٠.	, \$\$.	-+( .	Bc <sup>·</sup>
DUgg Dfc[fUa '7YffjZJVVIrjcb'	_	DUgg WffjZJWlfjcb	7ca d`]Ubhk ]h\ 7cbX]h]cbg	M∕g <sup>·</sup>

<sup>%</sup>A cb]hcfYXžVi hbchYj U'i UhYX/\ck Yj Yfžth.]g'Wb']a dUWhch\Yf'gi WWgg'a YUgi fYg''

<sup>&</sup>amp;′<cigY\c`Xgʻh\Uh\UX`Uʻgi WWrggZi``\cig]b[ʻci HW¢a Y`k]h\ci h875`Ugg]gHUbWr`kYfY`YIWIXYX`Zfca 'h\Y`Wi`W`Uh]cb"`



**7UhY[cfm** FUd]X:FY!\cig]b[

5[YbWtn . MA 75]

 Dfc[fUa .
 F Ud]X F Y!\ci g]b[

 DYf]cX.
 +#%#% ! %&# %#%

DYfZcfa UbW. ... A YX]i a ...

GHUfh]b[ 'xi `m'/zi &\$%+zi NA 75 hcc\_cj Yf h\Y fUd]X fY!\ci g]b[ 'dfc[fUa Zcf\ca Y`Ygg g]b[`Y` UXi `hg" H\Y fYj Ua dYX dfc[fUa ZcW gYg cb h\Y Zc``ck]b[ ('HUf[Yh[fci dg.

- @cb[ hYfa \ca Y`Ygg k]h\ gYj YfY gYfj ]WY bYYXg UbX#cf X]gUV] ]h]Yg
- HfUbg]h]cb 5[Y Nti h\ f%!&( mYUf c`XgL'
- DfY[bUbhk ca Yb bchU fYUXmWbbYWWX hc Ubch\Yf fY!\ci g]b[ dfc[fUa ]
- JYHYfUbgik \ciXcibchei U`]ZmZcfJ5!ZibXYXfY!\cig]b['Ugg]gHUbW'fY''[''zGGJ: ŁUbX'UfY'bchVkbbYVMYX'hc'Ubch\YfJ5!ZibXYX'dfc[fUa

H\YFUd]XFY!\ci g]b[ 'dfc[fUa ']g'U\WbffU]nYX]bhYbg]j Y\WgY'a UbU[Ya Ybhdfc[fUa '\wbg]gh]b[ cZhYUa g'h\Uhk cf\_k]h\ ]bX]j ]Xi U'g'h\fci [\ci h'h\Y]f'ghUm]b'h\Yg\YhYf'gnghYa ž'dfcj ]X]b[ ']bX]j ]Xi U']nYX\ci g]b[ 'ghUV]]nUh]cb'd'Ubg'UbX'dcghg\Y'hYf'gYfj ]Wg']b'\ci g]b[ "'7UgY'A UbU[Yfg']b\_dYcd'Y'hc Wa a i b]hmgi ddcfhg'UbX'gYfj ]Wg'hc Ybgi fY'\ci g]b[ 'ghUV]]hmži \\_Y'a YbhU'\YU'h\žgi VghUbW'UVi gYžd\ng]\W'\YU'h\WfYžYa d`cna YbhUbX'cV'hfU]b]b[žUbX'\ci g]b[ 'fYgci fWg''7UgY'A UbU[Yfg'Wbh]bi Y'hc'k cf\_k]h\ dYcd'Y'UZhYf'h\YmUfY'\ci gYX']b'cfXYf'hc'dfcj ]XY'h\Ygi ddcfhg'bYYXYX'hc'a U]bhU]b qhUVY'\ci q]b[ "''

#### Dfc[fUa 'Ci hMta Y 5Mx]Yj Ya Ybh+#%#% 'hc' %&# %#% . FUd]X FY!\ci g]b['

A YUgi fY		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!Ubbi ປ΄ 5 <b>Vhi</b> ປ΄	5 <b>VN</b> ]Yj YX
7Uffncj Yf' <ci gy\c`xg'gyfj="" th="" yx%'<=""><th>٠</th><th>''\$</th><th>1 - 1 -</th><th>B#5<sup>-</sup></th></ci>	٠	''\$	1 - 1 -	B#5 <sup>-</sup>
BYk ' <ci gy\c`xg'gyfj="" td="" yx'<=""><td>٠</td><td>) \$\$.</td><td>('''</td><td>Bc<sup>·</sup></td></ci>	٠	) \$\$.	('''	Bc <sup>·</sup>
<ci gy\c`xg'gyfj="" td="" yx'<=""><td>٠,</td><td>, '\$'</td><td>, &amp;* `</td><td>M/g<sup>-</sup></td></ci>	٠,	, '\$'	, &* `	M/g <sup>-</sup>
9l]hYX' <cigy\c`xg%'< td=""><td>٠</td><td>) ' \$ .</td><td>) - \$ '</td><td>B#5<sup>-</sup></td></cigy\c`xg%'<>	٠	) ' \$ .	) - \$ '	B#5 <sup>-</sup>
A cj Ya Ybh	1	%) .	<b>%</b> .	B#5 <sup>-</sup>
Gi WWyggZi`` <ci g]b['ci="" lwta="" td="" yg'<=""><td>٠,</td><td>'%'</td><td>&amp;- ) ·</td><td>M/g<sup>-</sup></td></ci>	٠,	'%'	&- ) ·	M/g <sup>-</sup>
Gi WWyggZi`~ci g]b['Ci HWta Yg'	1 '	* \$ '	) \$ .	Bc <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" yg'flh]yf'&'<br="">G\Y`hYfgL'</ci>	1 .	1.1.1	' ( '	M/g <sup>-</sup>
5j YfU[Y`@Yb[h\`cZG\Y`hYf`GhUm	8Ungi	')	1	M/g <sup>-</sup>
5j YfU[Y`@Yb[th`cZDUffj]V]dUtjcb`	8Ungi	- \$ .	- , .	M/g <sup>-</sup>
I gU[Y'cZ7G6'8]fYVM7`]Ybh5gg]ghUbW4	Ι,	) \$ .	(\$	Bc <sup>·</sup>
I gU[Y'cZ7G6'8]fYVMi7`]Ybhi5gg]ghUbW'	٠.	%\$\$ <sup>.</sup>	%% & ·	M/g <sup>-</sup>
FYVJX]j ]ga '	1	O%\$ ·	%* ·	Bc <sup>·</sup>
DUgg Dfc[fUa '7Yfh]ZJWh]cb''		DUgg Wfh]Z]Wh]cb	7ca d`]Ubhk ]h\ 7cbX]h]cbg	M/g <sup>·</sup>

<sup>%</sup> A cb]hcfYXžVi hbchYj U'i UhYX/\ckYj Yfžh\]g VWb ]a dUWhch\Yf gi VWYgg a YUgi fYg"

& <cigY\c`Xg`h\Uh\UX`U`gi WWqqZi``\cig]b[`cihWdaYk]h\cih875`Ugq]ghUbWikYfYYIWiXYX`Zfca h\Y`W'W`Uh]cb"`

MA 751 FUd]XFY!\cig]b[

7UH[cfm FUd]X:FY!\ci g]b[

Dfc[fUa. FUd]XFY!\ci g]b[ 8J DfcYVM

DYf]cX. +#%#% ! %&# %#%

DYfZcfa UbW... B#5.4.

GHUffnjb[]b: M&\$&\$žMa 75 VY[UbcdYfUhjb[UfUd]XfY!\cig]b[dfc[fUaZcf\caYYggg]b[YUXi hg:UbXZUa]]Ygk\c\UjYYIdYf]YbWYXXcaYghjWj]cYbWY"

H\YFUd]XFY!\ci g]b[ 'dfc[fUa ']g'U'WblfU]nYX]bhYbg]j Y'WgY'a UbU[Ya Ybhdfc[fUa 'Wbbg]gh]b[ 'cZhYUa g'h\Uhk cf\_k]h\ ]bX]j ]Xi U'g'h\fci [\ci h'h\Y]f'ghUm]b'h\Yg\Y'hYf'gnghYa ž' dfcj ]X]b[ ']bX]j ]Xi U']nYX\ci g]b[ 'ghUV]]nUh]cb'd'Ubg'UbX'dcghg\Y'hYf'gYfj ]Wg']b'\ci g]b[ '"7UgY'A UbU[Yfg']b\_dYcd'Y'hc Wa a i b]hmgi ddcfhg'UbX'gYfj ]Wg'hc Ybgi fY'\ci g]b[ 'ghUV]]hmži ']\_Y'a YbhU'\YU'h\žgi VghUbW'UVi gYžd\ng]WU'\YU'h\WbfYžYa d'cna YbhUbX'cV'hfU]b]b[žUbX'\ci g]b[ 'fYgci fWg''7UgY'A UbU[Yfg'Wbh]bi Y'hc k cf\_k]h\ dYcd'Y'UZhYf'h\YmUfY'\ci gYX']b' cfXYf'hc dfcj ]XY'h\Ygi ddcfhg'bYYXYX'hc a U]bhU]b ghUVY'\ci g]b[ "''

#### Dfc[fUa Ci hwta Y 5Wk]Yj Ya Ybh+#%#% hc %&# %#% . FUd]X FY!\ci g]b[

A YUgi fY <sup>.</sup>		GYa ]lUbbi Ư΄ ; cƯ΄	GYa]!Ubbi U` 5 <b>Vhi</b> U`	5 <b>W</b> (]Yj YX
7Uffncj Yf' <ci gy\c`xg'gyfj="" th="" yx%'<=""><th>,</th><th>\$.</th><th>\$.</th><th>B#5<sup>-</sup></th></ci>	,	\$.	\$.	B#5 <sup>-</sup>
BYk ' <ci gy\c`xg'gyfj="" td="" yx'<=""><td>٠,</td><td>)).</td><td>+%</td><td>M∕g<sup>·</sup></td></ci>	٠,	)).	+%	M∕g <sup>·</sup>
<ci gy\c`xg'gyfj="" td="" yx<=""><td>٠,</td><td>)).</td><td>+%</td><td>M∕g<sup>·</sup></td></ci>	٠,	)).	+%	M∕g <sup>·</sup>
9l ]hYX <ci gy\c`xg%<="" td=""><td></td><td>\$.</td><td>&amp;) ·</td><td>B#5<sup>-</sup></td></ci>		\$.	&) ·	B#5 <sup>-</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td></td><td>\$.</td><td><b>%</b>.</td><td>M/g<sup>-</sup></td></ci>		\$.	<b>%</b> .	M/g <sup>-</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>1</td><td>* \$ '</td><td>(, .</td><td>Bc<sup>·</sup></td></ci>	1	* \$ '	(, .	Bc <sup>·</sup>
5j YfU[Y`@Yb[H\`cZG\Y`HYf`GHUm	8Ungi	B#5 <sup>-</sup>	&) ·	B#5 <sup>-</sup>
5j YfU[Y`@Yb[th`cZDUffjVjjdUfjcb`	8Ungi	B#5 <sup>-</sup>	( * ·	B#5 <sup>-</sup>
±bWfYUgY]bWlg\]bWlaYflthUb Yad`cmaYbHz7fcaYbHfmhcYl]h	1 .	B#5 <sup>-</sup>	,	B#5 <sup>-</sup>
±bWfYUgY]b]bWcaYZfca Yad`cmaYbhž Zfca YbhfmhcYl]h	1 .	B#5 <sup>-</sup>	( '	B#5 <sup>-</sup>
FYVIJX]j ]ga & ·	1	B#5 <sup>-</sup>	B#5 <sup>-</sup>	B#5 <sup>-</sup>
DUgg Dfc[fUa '7YffjZjWlfjcb''		DUgg Wfh]Z]Wh]cb	B#5	B#5 <sup>-</sup>

& Dfc[fUa hcc bYk hc VY Yj U'i UhYX"

<sup>%</sup> A cb]hcfYXžVi hbchYj U'i UhYX/\ck Yj Yfžh\]g WUb ]a dUWich\Yf gi WWgg a YUgi fYg"



# DYfa UbYbh'Gi ddcfhjj Y'<ci gjb['

**7UHY[cfm** DYfa UbYbhGi ddcfh]j Y <ci g]b[

5 | YbWtn 5 | Jo#5a Yth nothž = bW

Dfc[fUa. HF 5#GF 5

DYf]cX. +#%#% ! %%# %#%

DYfZcfa UbW. · · A YX]i a ·

5j]gcdYfUhYg) &ib]hgcZdYfa UbYbhgi ddcfhjjY\cig]b[]bhY[fUhYXk]h\UVt\c`žXfi[ž hfUia UžUbXa YbhU`\YU'h\hYUha YbhZcfkca Yb"DUfhjV]dUbhgUfYY`][]VYZcfdYfa UbYbh giddcfhjjY\cig]b[VYVVIigYcZh\Y]f\caYYggbYgg'UbX'h\Y]fX]gUV]`]hmcZVV(fcb]VVgiVghUbW' UVigY"GhUfhjb[: M&\$% žh\Y'dfc[fUa VVIdUV]hmkUg'fYXiWYX'hc')&ib]hg'Zfca h\Y'dfYj]cig'+&ib]hg''

K \] Y dUft] WdUbtg`] Y ]b U gUZY \ci g]b[ ]b U Wa a i b]tmcZfYWa Yfmath YmdUft] WdUhY ]b UXX] Wf]cb HYUha YbhUbX ch Yf gi ddcft] Y gYfj ]W g"GYfj ]W g UfY ]bhYbg] Y UbX`cb [!hYfa UbX ]bWi XY ]bX] ]Xi U UbX [fci d'Wa bgY`]b [ žWgY a UbU [ Ya Ybhza YbhU`\YU'h gYfj ]W gz UbX YXi Wh]cb UbX Ya d`cma YbhdfYdUfYXbYgg" Ch Yf ]ggi Yg UXXfYggYX ]bWi XY. "dUfYbh]b [ / \YU'h mfY`Uh]cbg\]dg/d\ng] W `\YU'h \Ub [ Yf a UbU [ Ya Ybh < ] #5-8G#GH8 dfYj Ybh]cbz XYhYWf]cb UbX HYUha YbhYgd]f]hi U ]mmubX W hi fU YI d`cfUh]cb" 7\] XfYb U gc fYW] j Y U fUb [ Y cZgYfj ]W gz ]bWi X]b [ Ya Yf [ YbWhVUNng]hh]b [ žUZhYf gWkcc`dfc [ fUa a ]b [ žh YfUdYi h]wgi a a Yf Wa džUbX ZUa ] mwi bgY`]b ["H ]g k ]` VY h Y UghmYUf 5 j ]g cdYfUhYg h Y dfc [ fUa "

Dfc[fUa Ci h/n/ca Y 5V/N]Yj Ya Ybh+#%#% hc %&# %#%. DYfa UbYbhGi ddcfh]j Y < ci g]b[

A YUgi fY		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!Ubbi U' 5 <b>Vhi</b> U'	5 <b>W</b> (]Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" td="" yx''<=""><td></td><td>) + .</td><td>(' '</td><td>Bc<sup>·</sup></td></ci>		) + .	(' '	Bc <sup>·</sup>
9l]hYX' <cigy\c`xg%'< td=""><td></td><td>B#5<sup>·</sup></td><td>( .</td><td>B#5<sup>·</sup></td></cigy\c`xg%'<>		B#5 <sup>·</sup>	( .	B#5 <sup>·</sup>
<ci "ghuv]`]hm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>* ( '</td><td>M/g<sup>·</sup></td></ci>	A cbh\g	&( ·	* ( '	M/g <sup>·</sup>
Hi fbcj Yf'FUHY%'	1 '	%\$ <sup>·</sup>	,	B#5 <sup>·</sup>
Gi WWggZi`~ci g]b['Ci hWta Yg'		) %	(%	Bc <sup>·</sup>
Gi WWggZi`~ci g]b['Ci hWta Yg'	Ι.	- \$`	- ) ·	M/g <sup>·</sup>
Gi WWggZi `` <ci '9l="" ]hg'<="" g]b[="" td=""><td>Ι.</td><td>) \$ .</td><td>) \$ .</td><td>M/g<sup>·</sup></td></ci>	Ι.	) \$ .	) \$ .	M/g <sup>·</sup>
<ci '5zzcfxuv]`]hmuh9l="" ]ha<="" g]b[="" td=""><td>Ι.</td><td>) \$ .</td><td>%\$\$<sup>.</sup></td><td>B#5<sup>·</sup></td></ci>	Ι.	) \$ .	%\$\$ <sup>.</sup>	B#5 <sup>·</sup>
9l]hhc' <ca td="" y'yggbygg'<=""><td>Ι.</td><td>O%\$<sup>·</sup></td><td>\$.</td><td>M/g<sup>·</sup></td></ca>	Ι.	O%\$ <sup>·</sup>	\$.	M/g <sup>·</sup>
Dfc[fUa 'CWW dUbWhFUhY'	Ι.	%\$\$ <sup>.</sup>	+) .	Bc <sup>·</sup>
DUgg Dfc[fUa '7Yfh]Z]VVIh]cb'		DUgg Wfh]Z]Wh]cb	Bcb!7ca d`]Ubh	Bc <sup>·</sup>
BY[UhjjYFYUgcb7Zcf@YUj]b[	Ι.	&\$ ·	\$.	M/g <sup>·</sup>
±bWfYUgY]bWJg\]bWdaYfch\Yf h\UbYad`cmaYbhŁZfcaYbhfmhcYl]h cfYbXcZfYdcfh]b[dYf]cX	1 '	<b>'</b> \$	&- ·	M∕g <sup>·</sup>
±bWfYUgY]b]bWtaYZfca Yad`cmaYbbzZfcaYbbfmhcYl]hcf YbXcZfYdcfh]b[dYf]cX	1 .	%) .	&' ·	M∕g <sup>·</sup>

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX""

& %\ci gY\c`X`k Ug`YI WI XYX`Zfca a YUgi fY`Xi Y`hc`]bWta d`YhY`XUhU""

-

<sup>&#</sup>x27;', '\ci gY\c`Xg`k YfY`YI Wî XYX`Zfca 'a YUgi fY`Xi Y`hc`W]Ybhg`fYg]X]b[ `]b`dfc^YWh`Ygg`h\Ub'' \*) `XUng''`



**7UHY[cfm** DYfa UbYbhGi ddcfh]j Y <ci g]b[

5[YbWm 9ei]hUg < YUh)

Dfc[fUa. HF5]

DYf]cX. " +#%#% ! "%# %#% "

DYfZcfa UbW. · · <][\

9ei]hUg'<YU'h\ `\ci g]b[ 'dfc[fUa 'gYfj Yg`\ca Y`Ygg`]bX]j]Xi U'g'k\c'UfY``]j]b[ 'k]h\ '< ₹5-8G"` DUff]WdUbhg'fYW]j Y'gi ddcfn]j Y'gYfj]W'gžgi W\ 'Ug'WlgY'a UbU[ Ya YbhUbX'a YbhU`\YU'h\ h\YfUdn'H\Y'dfc[fUa 'dfcj]XYg'hYbUbhVUgYX'dYfa UbYbhgi ddcfn]j Y'\ci g]b[ 'Zcf', - 'i b]ng"' 7c`i a Vi g'5-8G'HUg\_: cfW'Gdcbgcf!VUgYX'FYbhU`5gg]ghUbW'fGF5ŁWbj YfhYX']bhc'HYbUbh VUgYX'FYbhU`5gg]ghUbW'fHF5Łi b]hg']b: M&\$%\$"

5g'cZ5df]`%%z'&\$%\* žh\Y'U[YbWhYldUbXYX']hg'a ]gg]cb'UbX'W\Ub[YX']hg'bUa Y'Zfca '5=8G' FYgci fW'7YbhYf'C\]c'f5F7CL'hc'9ei ]hUg'<YU'h\"

#### Dfc[fUa 'Ci h/nta Y 5v/k]Yj Ya Ybh+#%#% 'hc'%&# %#% . 'DYfa UbYbh'Gi ddcfh]j Y '< ci g]b['

A YUgi fY		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!UbbiU^ 5V <b>h</b> iU^	5 <b>\%</b> ]Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" td="" yx''<=""><td></td><td>- ,</td><td>- &amp;<sup>·</sup></td><td>M/g<sup>·</sup></td></ci>		- ,	- & <sup>·</sup>	M/g <sup>·</sup>
9l ]h/X' <ci gy\c`xg%'<="" td=""><td></td><td>B#5<sup>-</sup></td><td>1 *</td><td>B#5<sup>-</sup></td></ci>		B#5 <sup>-</sup>	1 *	B#5 <sup>-</sup>
<ci 'ghjv]`]hm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( '</td><td>%%&amp;<sup>.</sup></td><td>M/g<sup>·</sup></td></ci>	A cbh\g	&( '	%%& <sup>.</sup>	M/g <sup>·</sup>
Hi fbcj Yf'FUhY%'	1 .	%\$ <sup>.</sup>	1 2	B#5 <sup>-</sup>
Gi WWggZi`~ <ci g]b['ci="" lwta="" td="" yg'<=""><td></td><td></td><td>- \$`</td><td>M/g<sup>·</sup></td></ci>			- \$`	M/g <sup>·</sup>
Gi WWyggZi`` <ci g]b['ci="" td="" wta="" yg&'<=""><td>1 .</td><td>- \$</td><td>%\$\$<sup>.</sup></td><td>M/g<sup>·</sup></td></ci>	1 .	- \$	%\$\$ <sup>.</sup>	M/g <sup>·</sup>
Gi WWggZi`` <ci g]b['9 ]hg&'<="" td=""><td>1 .</td><td>) \$ .</td><td>%\$\$<sup>.</sup></td><td>M/g<sup>·</sup></td></ci>	1 .	) \$ .	%\$\$ <sup>.</sup>	M/g <sup>·</sup>
<ci '572cfxuv]`]hmuh9l="" ]ha<="" g]b[="" td=""><td>1 .</td><td>) \$ .</td><td>%\$\$<sup>.</sup></td><td>B#5<sup>-</sup></td></ci>	1 .	) \$ .	%\$\$ <sup>.</sup>	B#5 <sup>-</sup>
9l]hhc <ca td="" yyggbygg<=""><td>1 .</td><td>O%\$ ·</td><td>\$.</td><td>M/g<sup>·</sup></td></ca>	1 .	O%\$ ·	\$.	M/g <sup>·</sup>
Dfc[fUa 'CWW/dUbWhFUhY'	1 .	%\$\$ <sup>.</sup>	-, .	M/g <sup>·</sup>
DUgg Dfc[fUa '7YffjZ]VVIrjcb'		DUgg WftjZWhjcb	7ca d`]Ubhk ]h\ 7cbX]h]cbg	M/g <sup>·</sup>
BY[UhjjYFYUgcbZcf@YUj]b[&	1 .	&\$ ·	\$ <sup>.</sup>	M∕g <sup>·</sup>
±0-WiYUgY]b WUg\]b Wta Y ftch\Yf h\Ub Ya d`cma Ybht: Zica Ybhfmhc Yl]hcf YbX cZfYdcfh]b[dYf]cX&z	1	<b>'</b> \$	1 _ 1	<b>№</b> g⁻
±bWfYUgY]b]bWtaYZfca Yad`cmaYbhzZfcaYbhfmhcYl]hcf YbXcZfYdcfh]b[dYf]cX <sup>&amp;Z</sup>	1	%) .	%) .	M/g <sup>·</sup>

& & XYVVVUgYX \cigY\c Xg k YfY Yl Wl XYX Zfca a YUgi fY"

9ei]hUgi<YUh\ii HF5

<sup>%&#</sup>x27;A cb]hcfYXžVi hbchYj U'i UhYX"

ˈ%\$`\cigŸ\c`Xg`kັYfY`YlĭVilXYX`Zfca aYUgifY`XiY`hc`Vv]Ybhg`fYg]X]b[ˈ]b`dfc^YVhr`Ygg`h\Ub''\*) XUng"'

#### : M&\$&\$ Dfc[fUa '9j U'i Uh]cb

7UhY[cfm DYfa UbYbhGi ddcfh]j Y < ci g]b[ 5[YbWm 7ca a i b]hm < ci g]b[ BYhk cf\_

**Dfc[fUa**. 6f][[gXUY]

DYf]cX. +#%#% ! %&# %#%

DYfZcfa UbW. · · <][\

7<BNy 6f][[gXUY 5dUfha YbhgžU")!ib]hZJWj]mžcdYbYX]b A UfW &\$\$\* UbX dfcj]XYg &) \ci g]b[i b]hg ZcfdYcdYk]h X]gUV]]hJYg Yl dYf]YbWjb[\ca YYggbYgg UbX %\$i b]hg cZ gi ddcfhj Y\ci g]b[i Zcfch\Yf]bXjj ]Xi Ug k]h a YbhU] bYgg"h Y dfcYWigYfj Yg`cb[!hYfa UbX Wfcb]WD`m\ca Y`Ygg]bXjj ]Xi Ug X]gUVYX Vma YbhU] bYggžgi VghUbW UXX]Wjcbžcf Vch\žk\c UfY cZhYb gi fj ]j cfg cZd\ng]WUžYa chjcbUžUbX gYl i U`UVi gY UbX\Uj Y dYfgcbU`UbX [YbYfUhjcbU`]ghcf]Yg h\Un]bWi XY dcj YfmžXfi [gžUVi gYž\ca Y`YggbYggž]bWlfWfUhjcbž ]bghjh hjcbU]nUhjcbžUbX`cb[!hYfa i bYa d`cna Ybh'H\Y dfc[fUa žVi]hcbh\Y GhU[Yg cZ 7\Ub[Ya cXY`ž\Ug &(!\ci f`ghUZ]b[UbX cbg]hY gi ddcfhj Y`gYfj]Wg dfcj]XYX VmGci h\YUghž \\
\b\WGYfj]Wg ]bWi XY ci hYUWXžgYfj ]W Yb[U[Ya YbhžUgg]ghUbW k]h\[cu d`Ubb]b[žWlgY a UbU[Ya YbhžhYUha YbhUbX a YbhU`\YUh\ gYfj]Wgz]bX]j ]Xi U`UbX [fci d`dfc[fUa a]b[ž UbX Ya d`cna YbhgYfj]Wg"Cbg]hY ghUZcf]Ybhg hYbUbhg hc``jj]b[']b Ugi ddcfhj Y`\ci g]b['dfc[fUa /Ugg]ghh\Ya k]h\[ci g]b['!fY`UhYX]ggi Yg/UbX'dfcj]XY\WfJg]g']bhYfj YbhJcbžWcbZ]Whifygc`i hjcbžUbX XU]`m`]j ]b['Ugg]ghUbW'"

Dfc[fUa 'Ci hWta Y 5VN]Yj Ya Ybh+#%#% 'hc'%&# %#% . 'DYfa UbYbhGi ddcfhjj Y '<ci gjb[''

A YUgi fY		GYa ]!Ubbi ປົ΄ ; cປົ΄	GYa]!UbbiU' 5WiU'	5 <b>W</b> (]Yj YX
<ci gy\c`xg'gyfj="" th="" yx``<=""><th></th><th>&amp;+ ·</th><th>&amp;* ·</th><th>M∕g<sup>·</sup></th></ci>		&+ ·	&* ·	M∕g <sup>·</sup>
9l ]h/X´ <ci gy\c`xg%`<="" td=""><td></td><td>B#5<sup>-</sup></td><td>&amp;`</td><td>B#5<sup>-</sup></td></ci>		B#5 <sup>-</sup>	&`	B#5 <sup>-</sup>
<ci ]tm<="" g]b[="" gruv]="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>)).</td><td>M/g<sup>-</sup></td></ci>	A cbh\g	&( ·	)).	M/g <sup>-</sup>
Hifbcj Yf FUNY%	Ι.	%\$ ·		B#5 <sup>-</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg''<=""><td></td><td>&amp;( ·</td><td>&amp;) ·</td><td>M∕g<sup>·</sup></td></ci>		&( ·	&) ·	M∕g <sup>·</sup>
Gi WWyggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>Ι.</td><td>- \$`</td><td>- * '</td><td>M∕g<sup>·</sup></td></ci>	Ι.	- \$`	- * '	M∕g <sup>·</sup>
Gi WWggZi `` <ci '9 ="" ]hg'<="" g]b[="" td=""><td>Ι.</td><td>) \$<sup>·</sup></td><td>) \$ .</td><td>M∕g<sup>·</sup></td></ci>	Ι.	) \$ <sup>·</sup>	) \$ .	M∕g <sup>·</sup>
<ci 5zzcfxuv]]hmuh9l]h%<="" g]b[="" td=""><td>Ι.</td><td>) \$<sup>·</sup></td><td>%\$\$<sup>-</sup></td><td>B#5<sup>-</sup></td></ci>	Ι.	) \$ <sup>·</sup>	%\$\$ <sup>-</sup>	B#5 <sup>-</sup>
91]hhc < ca YYggbYgg	Ι.	O%\$ ·	B#5 <sup>-</sup>	B#5 <sup>-</sup>
Dfc[fUa 'CWWdUbWhFUhY'	Ι.	- ) ·	- * '	M∕g <sup>·</sup>
DUgg Dfc[fUa '7Yfh]Z]VVIh]cb		DUgg WfhjZjWhjcb	Bcb!7ca d`]Ubh	Bc <sup>*</sup>
BY[Uh]jYFYUgcbZcf@YUj]b[	1 .	&\$ ·	\$.	M/g <sup>-</sup>
±bVfYUgY]bVWg\]bWdaYfth\Yf h\UbYad`cnaYbHzTcaYbHfmhc Yl]hcfYbXcZfYdcfh]b['dYf]cX&	I ·	' \$ <sup>·</sup>		M/g <sup>-</sup>
±bWfYUgY ]b ]bWta Y Zfca Ya d`cma YbhžZfca Ybhfmhc Yl ]hcf YbX cZfYdcfh]b[ dYf]cX&	1	%) .	( .	Bc <sup>·</sup>

<sup>%&#</sup>x27;A cb]hcfYXžVi hbchYj U'i UhYX''

Bc'\cigY\c`XYI]hg/ibUVYhc'WUW\'UhYaYUgifY"

<sup>&</sup>amp;" \cigY\c`Xg`k YfY`YI WI XYX`Xi Y`hc`W]Ybhg`fYg]X]b[`]b`dfc^YVhr`Ygg`h\Ub'' \*) `XUng''



7UhY[cfm DYfa UbYbhGi ddcfh]j Y <ci g]b[ 5[YbWh 7ca a i b]hm<ci q]b[ BYhk cf\_

**Dfc[fUa**. 6f][[gXUY&

DYf[cX. +#%#% ! %## %#%

DYfZcfa UbW. A YX]i a

7<BNJ of [[gXUY & 5dUffa YbhgžU (\$!i b]hZUN]]mäcdYbYX ]b CVMcVYf &\$% "H\Y dfc YVM gYfj Yg cb[!hYfa UbX VN fcb]VV m\ca Y Ygg ]bX]j ]Xi Ug X]gUV YX Vma YbhU ] bYggžgi VghUbW UXX]MJcbžcf Vch\žk\c UfY cZhYb gi fj ]j cfg cZd\ng]WUžYa chcbUžUbX gYl i U UVi gY UbX \Uj Y dYfgcbU UbX [YbYfUh]cbU \]ghcf]Yg h\Uh]bWi XY dcj YfmäXfi [gžUVi gYž\ca Y YggbYggž ]bVWfWfUh]cbž]bghjhi hjcbU ]nUhjcbžUbX cb[!hYfa i bYa d`cna Ybh' h\Y dfc[fUa žVi] hcb h\Y GhU[Yg cZ7\Ub[Ya cXY`ž\Ug &(!\ci f'ghUZ]b[ UbX cbg]hY gi ddcfhjj Y gYfj ]Wygdfcj ]XYX Vm Gci h\YUghž =bWGYfj ]Wyg ]bWi XY ci hYUWXžgYfj ]W Yb[U[Ya YbhžUgg]ghUbW k]h\ [cU dfc[fUa a]b[žUbX Ya d`cna YbhgYfj ]Wyg" Cbg]hY ghUZzcf]Ybhg hYbUbhg hc`]j ]b[ ]b U gi ddcfhjj Y \ci g]b[ dfc[fUa /Ugg]ghh\Ya k]h\ \ci g]b[!fY`UhYX]ggi Yg/UbX dfcj ]XY WJg]g]bhYfj YbhJcbž WbZ]WffYgc`i hjcbžUbX XU]`m]j ]b[ Ugg]ghUbW""

Dfc[fUa 'Ci hwca Y 5vx]Yj Ya Ybh+#%#% 'hc' %&# %#% . 'DYfa UbYbh'Gi ddcfh]j Y '<ci g]b[''

A YUgi fY		GYa ]!Ubbi ປົ΄ ; cປິ່	GYa]!UbbiU' 5WhU'	5 <b>W</b> (]Yj YX
<ci gy\c`xg'gyfj="" th="" yx``<=""><th></th><th>(('</th><th>((.</th><th>M∕g<sup>·</sup></th></ci>		(('	((.	M∕g <sup>·</sup>
9l]hYX´ <cigy\c`xg%`< td=""><td></td><td>B#5<sup>-</sup></td><td>* '</td><td>B#5<sup>-</sup></td></cigy\c`xg%`<>		B#5 <sup>-</sup>	* '	B#5 <sup>-</sup>
<ci 'gyuv]`]tm<="" g]b[="" td=""><td>A cbh\g</td><td>%&amp;<sup>·</sup></td><td>%&amp;<sup>·</sup></td><td>M/g<sup>-</sup></td></ci>	A cbh\g	%& <sup>·</sup>	%& <sup>·</sup>	M/g <sup>-</sup>
H fbcj Yf FUNY%	1 .	%\$ ·	%) .	B#5 <sup>-</sup>
Gi WWggZi `` <ci 'ci="" g]b[="" hwta="" td="" yg''<=""><td></td><td>(\$'</td><td>(\$.</td><td>M/g<sup>-</sup></td></ci>		(\$'	(\$.	M/g <sup>-</sup>
Gi WWggZi `` <ci 'ci="" g]b[="" lwta="" td="" yg'<=""><td>1 .</td><td>- \$.</td><td>- %</td><td>M/g<sup>-</sup></td></ci>	1 .	- \$.	- %	M/g <sup>-</sup>
Gi WWggZi `` <ci '9 ="" ]hg'<="" g]b[="" td=""><td>1 .</td><td>) \$ .</td><td>1.1.1</td><td>Bc<sup>·</sup></td></ci>	1 .	) \$ .	1.1.1	Bc <sup>·</sup>
<ci 5zzcfxuv]="" ]lf@<="" ]lmuh9l="" g]b[="" td=""><td>1 '</td><td>) \$ .</td><td>%\$\$<sup>.</sup></td><td>B#5<sup>-</sup></td></ci>	1 '	) \$ .	%\$\$ <sup>.</sup>	B#5 <sup>-</sup>
91]hhc <ca td="" yyggbygg<=""><td>1 .</td><td>O%\$ ·</td><td>\$.</td><td>M∕g<sup>·</sup></td></ca>	1 .	O%\$ ·	\$.	M∕g <sup>·</sup>
Dfc[fUa 'CWWdUbWhFUhY'	1 .	-) ·	-1	M/g <sup>-</sup>
DUgg Dfc[fUa '7Yfh]ZJWh]cb'		DUgg Wfh]Z]Wh]cb	Bcb!7ca d`]Ubh	Bc <sup>·</sup>
BY[UhjjYFYUgcbZcf@YUj]b[	1 '	&\$ ·	%+ ·	M/g <sup>-</sup>
±bVfYUgY]bVWg\]bVtaYfth\Yf h\UbYad`cmaYbHzZfcaYbHfmhc Yl]hcfYbXcZfYdcfh]b[dYf]cX&	1	' \$ <sup>·</sup>	) %	M/g <sup>-</sup>
±bWfYUgY]b]bWtaYZfca Yad`cmaYbhžZfcaYbhfmhcYl]hcf YbXcZfYdcfh]b[dYf]cX&	1	%) .	1 •	Bc <sup>*</sup>

<sup>%</sup>A cb]hcfYX VmbchYi U'i UhYX"

\*) \ci gY\c`Xg'k YfY'Yl Wl XYX'Xi Y'hc W]Ybhg'fYg]X]b[ ']b'dfc'YWh'Ygg'h\Ub'' \*) 'XUng''

<sup>&#</sup>x27; %\ci gY\c`X`k]h\``\$']bWta Y`UbX``\$'fYbhÜhYl]hk Ug'Yl Wl XYX'Zfca 'WU'W Uh]cb"'

#### : M&\$&\$ Dfc[fUa '9j U'i Uh]cb

7UhY [ cfm]DYfa UbYbhGi ddcfh]j Y <ci g]b[ ]</th>5[YbWn]7ca a i b]lm<ci g]b[ BYkk cf\_</th>Dfc[fUa]7UggUXm5j Ybi Y 5dUfha Ybhg

DYf]cX. +#%#% !:%&# %#%

DYfZcfa UbW." < ][\"

7ca a i b]lm<ci g]b[ BYHk cf\_f7<Błdfcj ]XYg % UdUfha Ybhg cb 7UggUXm5j Ybi Y Zcfa Yb k \c UfY Yl dYf]YbW]b[ \ca Y YggbYgg UbX UfY X]gUV YX Vma YbhU ] `bYggžgi VghUbW UVi gYžcf Xi U`X]U[ bcg]g "GYfj ]W g ]bWi XY UWW gg hc \YU h\ WUfYžU Wk\c` UbX Xfi [ 'hfYUha Ybh/UbX `]b\_U[ Y hc Wta a i b]lmgYfj ]W g dfcj ]XYX VmBUh]cbU 7\i fWk F Yg]XYbW g fB 7F L" 7<B gYfj Yg Ug h\ Y Vi ] `X]b[ 'XYj Y`cdYf UbX a UbU[ Yf"5 F Yg]XYbhA UbU[ Yf`]j Yg cbg]hY UbX Uggi fYg gYW f]lmUbX UWW gg hc ghUZZ Zcf U` fYg]XYbhg "B7F ghUZZ dfcj ]XYg fYZYffU hc \YU h\ WUfY dfcj ]XYfgžgi VghUbW UVi gYžUbX a YbhU \YU h\ hfYUha YbhgYfj ]W g UbX Ugg]ghUbW UVWYgg]b[ 'VYbYZ]hg"

Dfc[fUa Ci h/k/a Y 5V/k]/Yj Ya Ybh+#%#% hc %&# %#%. DYfa UbYbhGi ddcfnjj Y <ci g]b[

A YUgi fY		GYa ]!Ubbi ປ΄ ; cປົ	GYa]!Ubbi U' 5 <b>Vh</b> i U'	5 <b>/</b> \%]Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" th="" yx``<=""><th></th><th>%%</th><th>% .</th><th>M/g<sup>·</sup></th></ci>		%%	% .	M/g <sup>·</sup>
9l]hyx' <cigy\c`xg%'< td=""><td></td><td>B#5<sup>-</sup></td><td>( .</td><td>B#5<sup>-</sup></td></cigy\c`xg%'<>		B#5 <sup>-</sup>	( .	B#5 <sup>-</sup>
<ci 'ghjv]`]hm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>1 = 1</td><td>M<b>r</b>g<sup>-</sup></td></ci>	A cbh\g	&( ·	1 = 1	M <b>r</b> g <sup>-</sup>
H fbcj Yf'FUHY%'	1 .	%\$ ·	(\$'	B#5 <sup>-</sup>
Gi WWyggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td></td><td>%\$ ·</td><td>%%<sup>-</sup></td><td>M<b>r</b>g<sup>-</sup></td></ci>		%\$ ·	%% <sup>-</sup>	M <b>r</b> g <sup>-</sup>
Gi WWyggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>1 .</td><td>- \$`</td><td>- &amp;`</td><td>M<b>r</b>g<sup>-</sup></td></ci>	1 .	- \$`	- &`	M <b>r</b> g <sup>-</sup>
Gi WWggZi` <ci ]hg'<="" g]b['9 ="" td=""><td>Ι.</td><td>) \$<sup>·</sup></td><td>* + '</td><td>M<b>r</b>g<sup>-</sup></td></ci>	Ι.	) \$ <sup>·</sup>	* + '	M <b>r</b> g <sup>-</sup>
<ci '5zzcfxuv]`]hm'uh'9l="" ]h%'<="" g]b[="" td=""><td>Ι.</td><td>) \$<sup>·</sup></td><td>%\$\$<sup>.</sup></td><td>B#5<sup>-</sup></td></ci>	Ι.	) \$ <sup>·</sup>	%\$\$ <sup>.</sup>	B#5 <sup>-</sup>
9l]hhc' <ca td="" y'yggbygg'<=""><td>1 .</td><td>O%\$ ·</td><td>\$<sup>.</sup></td><td>M<b>r</b>g<sup>·</sup></td></ca>	1 .	O%\$ ·	\$ <sup>.</sup>	M <b>r</b> g <sup>·</sup>
Dfc[fUa 'CWWdUbWhFUhY'	1 .	-) ·	%\$\$ <sup>·</sup>	M/g <sup>·</sup>
DUgg Dfc[fUa '7Yfh]ZJVVh]cb'		DUgg Wfh]Z]Wh]cb	Bcb!7ca d`]Ubh	Bc <sup>·</sup>
BY[Uh]jYFYUgcb7Zcf@YUj]b[''	1 '	&\$ ·	\$.	M/g <sup>-</sup>
±5VfYUgY]bVVlg\]bVvtaYfth\UbYad`cmaYbht2fcaYbhfmhcYl]hcf YbXcZfYdcff]b[dYf]cX&²	1 .	<b>'</b> \$`	&&`	Bc <sup>·</sup>
±bVfYUgY]b]bWtaYZfca Yad`cmaYbhzZfcaYbhfmhcYl]hcf YbXcZfYdcfh]b[dYf]cX&z	Ι .	%) .	%%	M/g <sup>·</sup>

"%XYWYUgYX\cigY\c`XkUg`YIWIXYXZfca a YUgi fY"

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX""

<sup>&</sup>amp;" \cigY\c`Xg'k YfY YI WI XYX Zfca a YUgi fY Xi Y hc WJYbhfYgJX]b[ ]b dfc YWh`Ygg'h\Ub" \*) XUngi"



7UhY[cfm DYfa UbYbhGi ddcfh]j Y <ci g]b[ 5[YbWh 7ca a i b]hm<ci q]b[ BYhk cf\_

 Dfc[fUa."
 7ca a i b]lm57H

 DYf[cX."
 +#%#% ! %&# %#%

DYfZcfa UbW. · · A YX]i a

# Dfc[fUa 'Ci h/nta Y 5v/nt]Yj Ya Ybh+#%#% 'hc'%&# %#%. 'DYfa UbYbh'Gi ddcfhjj Y '<ci gjb['

A YUgi fY		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!UbbiU' 5WhiU'	5 <b>W</b> (]Yj YX
<ci gy\c`xg`gyfj="" th="" yx``<=""><th></th><th>( * ·</th><th>(%</th><th>M/g<sup>·</sup></th></ci>		( * ·	(%	M/g <sup>·</sup>
9l]h/X´ <cigy\c`xg%`< td=""><td></td><td>B#5<sup>·</sup></td><td>( .</td><td>B#5<sup>·</sup></td></cigy\c`xg%`<>		B#5 <sup>·</sup>	( .	B#5 <sup>·</sup>
<ci 'ghjv]`]hm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>* ( '</td><td>M/g<sup>·</sup></td></ci>	A cbh\g	&( ·	* ( '	M/g <sup>·</sup>
H fbcj Yf FUNY%	Ι.	%\$ <sup>.</sup>	%\$ <sup>·</sup>	B#5 <sup>-</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg''<=""><td></td><td>(%</td><td>1 _ 1</td><td>M/g<sup>·</sup></td></ci>		(%	1 _ 1	M/g <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg&'<=""><td>1 .</td><td>- \$<sup>·</sup></td><td>-, '</td><td>M/g<sup>·</sup></td></ci>	1 .	- \$ <sup>·</sup>	-, '	M/g <sup>·</sup>
Gi WWggZi`` <ci g]b['9 ]hg&'<="" td=""><td>1 .</td><td>) \$ .</td><td>* + '</td><td>M/g<sup>·</sup></td></ci>	1 .	) \$ .	* + '	M/g <sup>·</sup>
<ci '5zzcfxuv]`]lmiuh'9l="" '<="" ]lni@(="" g]b[="" td=""><td>1 .</td><td>) \$ .</td><td>%\$\$<sup>.</sup></td><td>B#5<sup>-</sup></td></ci>	1 .	) \$ .	%\$\$ <sup>.</sup>	B#5 <sup>-</sup>
9l]hhc' <ca td="" y'yggbygg'<=""><td>1 '</td><td>O%\$ ·</td><td><u>-</u> ·</td><td>M<b>r</b>g<sup>·</sup></td></ca>	1 '	O%\$ ·	<u>-</u> ·	M <b>r</b> g <sup>·</sup>
Dfc[fUa 'CWW dUbWhF UhY'	1 .	-) ·	* '	Bc <sup>·</sup>
DUgg Dfc[fUa '7Yffi]ZJVVIrjcb''		DUgg Wfh]Z]Wh]cb	Bcb!7ca d`]Ubh	Bc <sup>·</sup>
BY[Un]jY:FYUgcb:Zcf:@YUj]b[&:	Ι.	&\$ ·	\$ <sup>.</sup>	M/g <sup>·</sup>
±bWfYUgY]bWUg\]bWofaYfich\Yfh\Ub Yad`cmaYbHzZfcaYbHfmhcYl]hcfYbX cZfYdcfh]b[dYf]cX&z	1	<b>'</b> \$	**'	<b>M</b> ∕g⁻
±bWfYUgY]b]bWca YZfca Yad`cna Ybhž Zfca YbhfmhcYl]hcfYbXcZfYdcfh]b[ dYf]cX <sup>&amp;Z</sup>	1	%) .	1 .	Bc <sup>·</sup>

& %XYWYUgYX \cigY\c'X k Ug'YI WI XYX Zfca a YUgi fY"

('%\ci gY\c`X'k]h\``\$']bWta Y'UbX``\$'fYbhUhYl]hik Ug'Yl Wl XYX'Zfca 'WU'Wl'Uh]cb'''

7caaib]lmi<cig]b[BYlkcf\_1 7caaib]lmi5Wli

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX""

<sup>&#</sup>x27;'%%\ci gǐ\c`Xg'k YfY'Yl Wi XYX'2fca 'a YUgi fY'Xi Y hc WjYbhg fYgJX]b[ ]b dfc YWfYgg'h\Ub" \*) XUngi''

# : M&\$&\$ Dfc[fUa '9; Ui Uh]cb

7UhY[cfm] DYfa UbYbhGi ddcfh]j Y < ci g]b[ 5[YbWh] 7ca a i b]hm< ci g]b[ BYhk cf\_ Dfc[fUa. 9Ugh: ]Zh\ 5j Ybi Y 5dUfha Ybhg

DYf]cX. +#%#% ! %# %#%

DYfZcfa UbW. A YX]i a

7ca a i b]lm<ci g]b[ BYlk cf\_f7<B\(\frac{1}{1}\) B\(\frac{1}{1}\) \frac{1}{1}\) B\(\frac{1}{1}\) B\(\frac{1}\) B\(\frac{1}{1}\) B\(\frac{1}\) B\(

Dfc[fUa Ci Wta Y 5Wt]Yj Ya Ybh+#%#% hc %&# %#% . DYfa UbYbhGi ddcfhjj Y <ci g]b[

A YUgi fY		GYa ]lUbbi Ư˙ ; cƯ˙	GYa]!Ubbi U` 5V <b>h</b> i U`	5 <b>W</b> (]Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" td="" yx<=""><td></td><td>( &amp; ·</td><td>(\$<sup>-</sup></td><td>M/g<sup>-</sup></td></ci>		( & ·	(\$ <sup>-</sup>	M/g <sup>-</sup>
9I ]hYX' <ci gy\c`xg%'<="" td=""><td>٠</td><td>B#5<sup>-</sup></td><td>* '</td><td>B#5<sup>·</sup></td></ci>	٠	B#5 <sup>-</sup>	* '	B#5 <sup>·</sup>
<ci 'ghjv]`]hm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>۱ * ۰</td><td>M/g<sup>·</sup></td></ci>	A cbh\g	&( ·	۱ * ۰	M/g <sup>·</sup>
Hi fbcj Yf F UhY%	Ι.	%\$ ·	%* ·	B#5 <sup>·</sup>
Gi WWggZi `` <ci 'ci="" g]b[="" hwta="" td="" yg'<=""><td></td><td>1 ,</td><td>۱ * ۰</td><td>M/g<sup>·</sup></td></ci>		1 ,	۱ * ۰	M/g <sup>·</sup>
Gi WWggZi `` <ci '<="" 'ci="" g]b[="" hwta="" td="" yg'=""><td>Ι.</td><td>- \$`</td><td>- \$`</td><td>M/g<sup>·</sup></td></ci>	Ι.	- \$`	- \$`	M/g <sup>·</sup>
Gi WWggZi`` <ci g]b['9 ]hg''<="" td=""><td>Ι.</td><td>) \$ .</td><td>(\$</td><td>Bc<sup>·</sup></td></ci>	Ι.	) \$ .	(\$	Bc <sup>·</sup>
<ci '572cfxuv]`]hmuh'9l="" ]h%'<="" g]b[="" td=""><td>1 '</td><td>) \$ .</td><td>%\$\$<sup>.</sup></td><td>B#5<sup>·</sup></td></ci>	1 '	) \$ .	%\$\$ <sup>.</sup>	B#5 <sup>·</sup>
91 ]hhc' <ca td="" y'yggbygg'<=""><td>Ι.</td><td>O%\$ ·</td><td>\$.</td><td>M/g<sup>·</sup></td></ca>	Ι.	O%\$ ·	\$.	M/g <sup>·</sup>
Dfc[fUa 'CWW dUbWhFUhY'	Ι.	-) ·	- & <sup>·</sup>	M/g <sup>·</sup>
DUgg Dfc[fUa 7Yft]Z Wlt]cb		DUgg Wfh]Z]Wh]cb	Bcb!7ca d`]Ubh	Bc <sup>·</sup>
BY[Uh]jYFYUgcb7zcf@YUj]b[	1 '	&\$ ·	&\$ ·	M/g <sup>·</sup>
±bWfYUgY]bWlg\]bWlcaYflch\Yf h\UbYad`cnaYbhLZfcaYbhfmhcYl]h cfYbXcZfYdcfh]b[dYf]cX&z	1	' \$ <sup>·</sup>	<b>'</b> \$	M∕g <sup>·</sup>
±bVfYUgY]b]bVtaYZfca Yad`cmaYbbïZfcaYbHfmhcYl]hcf YbXcZfYdcfh]b[dYf]cX&z	Ι.	%) .	1 -	Bc <sup>·</sup>

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX""

``%XYWMUgYX`\ci gY\c`X`kUg`YIWIXYX`Zfca `a YUgi fY''`

<sup>&</sup>amp;\* '\ci gY\c'Xg'k YfY 'Yl Wi XYX'2fca 'a YUgi fY'Xi Y hc'W]Ybhg'fYg]X]b[ ]b'dfc'YWf\'Ygg'h\Ub'' \*) 'XUng'''



7UhY[cfm Dyfa UbybhGi ddcfh y <ci qb[ 7ca a i b]m<ci q]b[ BYkcf\_ 5[YbWm

Dfc[fUa." : Ua ]`m'<ca Yg DYfcX. +#%#% ! %&# %#%-

DYfZcfa UbW." <11/

7<B: Ua ] m<ca Yg hYbUbhg fYW]j Y U Z ```fUb[Y cZgi ddcfh]j Y gYfj ]Wg h\fci [\``]b\_U[Yg k]h\` Wea a i b]mtNUgYX gYfj ]WYg ZUWY]tUtYX Vm7<BÑy<ci q]b[ FYtYbh]cb GdYVNU]gh' HNY dfc[fUa gYfj Yg \ca Y Ygg ZJa ] ] Yg ]b k \ ]W Uh YUghcbY UXi h ]g X]gUV YX Vma YbHJ ] bYggžgi VgHJbW UVI qYžcfVch\": Ua j`jYq qYfj YX`\Uj Y``jj YX jb Ya Yfj YbWnq\Y`hYfg cf jb U'd`UW`bcha YUbhZcf \i a Ub\UV]HUhjcb UbX a Um\Uj Y YI dYf]YbWYX a i `hjd`Y Yd]gcXYg`cZ\ca Y`YggbYgg''

HNY dfc[fUa VVVdUVVmk Ug fYXi WYX hc %\$ i b]hg ghUfh]b[ A UfWk %2&\$%+"

#### Dfc[fUa Ci h/nta Y 5VN]Yj Ya Ybh+#%#% hc %&# %#%. DYfa UbYbhGi ddcfh]j Y < ci q]b[

A YUgi fY		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!Ubbi Uʻ 5VMi Uʻ	5 <b>/</b> \%]Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" td="" yx``<=""><td></td><td>%%</td><td>%\$ ·</td><td>M<b>r</b>g<sup>-</sup></td></ci>		%%	%\$ ·	M <b>r</b> g <sup>-</sup>
9I]hYX' <ci gy\c`xg%'<="" td=""><td>, c</td><td>B#5<sup>-</sup></td><td>\$.</td><td>B#5<sup>-</sup></td></ci>	, c	B#5 <sup>-</sup>	\$.	B#5 <sup>-</sup>
<ci 'gtuv]`]tm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>' &amp; '</td><td>M<b>r</b>g<sup>-</sup></td></ci>	A cbh\g	&( ·	' & '	M <b>r</b> g <sup>-</sup>
Hi fbcj Yf'FUhY%'	1 .	%\$ <sup>.</sup>	\$.	B#5 <sup>-</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg''<=""><td>, c</td><td>%\$ <sup>.</sup></td><td>%\$ <sup>.</sup></td><td>M<b>r</b>g<sup>·</sup></td></ci>	, c	%\$ <sup>.</sup>	%\$ <sup>.</sup>	M <b>r</b> g <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>1 .</td><td>- \$ .</td><td>%\$\$<sup>.</sup></td><td>M<b>r</b>g<sup>·</sup></td></ci>	1 .	- \$ .	%\$\$ <sup>.</sup>	M <b>r</b> g <sup>·</sup>
Gi W W gg Zi ` <ci '9 ="" ]hg&'<="" g]b[="" td=""><td>1 .</td><td>) \$ .</td><td>B#5<sup>-</sup></td><td>B#5<sup>-</sup></td></ci>	1 .	) \$ .	B#5 <sup>-</sup>	B#5 <sup>-</sup>
<ci '5zzcfxuv]`]lmuh9l="" ]lf@:<="" g]b[="" td=""><td>1 .</td><td>) \$ .</td><td>B#5<sup>-</sup></td><td>B#5<sup>-</sup></td></ci>	1 .	) \$ .	B#5 <sup>-</sup>	B#5 <sup>-</sup>
9l]hhc' <ca td="" y'yggbygg&'<=""><td>1 .</td><td>O%\$ ·</td><td>B#5<sup>-</sup></td><td>B#5<sup>-</sup></td></ca>	1 .	O%\$ ·	B#5 <sup>-</sup>	B#5 <sup>-</sup>
Dfc[fUa 'CWW dUbWhFUhY'	1 .	-) ·	%\$\$ <sup>.</sup>	M <b>r</b> g <sup>·</sup>
DUgg Dfc[fUa '7Yfh]ZJVVh]cb'		DUgg WfhjZwhjcb	Bcb!7ca d`]Ubh	Bc <sup>·</sup>
BY[Uh]jYFYUgcbZcf@YUj]b[&	1 '	&\$ ·	B#5 <sup>-</sup>	B#5 <sup>-</sup>
±bWfYUgY]bWlg\]bWlcaYftch\Yf h\UbYad`cmaYbHzZfcaYbHfmhc Yl]hcfYbXcZfYdcfh]b[dYf]cX	1	' \$ <sup>·</sup>	%\$ <sup>·</sup>	Bc.
#bWfYUgY]b]bWtaYZfca Yad`cmaYbhzZfcaYbhfmhcYl]hcf YbXcZfYdcff]b[dYf]cX	1	%) .	'\$'	M/g <sup>·</sup>

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX""

<sup>&</sup>amp; Dfc YVMX]X bch\Uj Y Ubm\ci gY\c`X YI ]hg/i bUV Y hc VWVV UhY a YUgi fY"

# : M&\$&\$ Dfc[fUa '9] U'i Uhicb'

7UhY[cfm DYfa UbYbhGi ddcfh]j Y < ci g]b[ 5[YbWh 7ca a i b]hm < ci g]b[ BYhk cf\_

DYfZcfa UbW. · · <][\

7<BNJ \*\*E[Yk ccX \*7ci ffřü \*\* \$!i b]hcbY!VYXfcca ZUNJ ]hržicdYbYX ]b A Um&\$% \*\*UbX dfcj ]XYg () i b]hg cZdYfa UbYbhgi ddcfhjj Y`\ci g]b[ Zcf \ca Y`Ygg ]bX]j ]Xi U`g"H\Y dfc YWfigYfj Yg \ca Y`Ygg ]bX]j ]Xi U`g X]gUV`YX Vma YbhU`]``bYgg cf Vch\ a YbhU`]``bYgg UbX gi VghUbW` UVi gY" A UbmcZh\YgY ]bX]j ]Xi U`g U`gc `\Uj Y`g][ b]Z]WUbhd\ng]WU``\YU`h\ dfcV`Ya g"H\Y dfc[ fUa žVi ]`h cb h\Y GhU[ Yg cZ7\Ub[ Y a cXY`ž\Ug & (!\ci f`ghUZ]b[ `UbX`cbg]hY gi ddcfhjj Y`gYfj ]W\*g dfcj ]XYX VmBUhjcbU` 7\i fW\ GYfj ]W\*g"GYfj ]W\*g"]bWi XY ci hYVW\zgYfj ]W Yb[ U[ Ya Ybhz Ugg]ghUbW`k ]h\ [ cU`d`Ubb]b[ žWUgY a UbU[ Ya YbhzhfYUha YbhUbX a YbhU`\YU`h\ gYfj ]W\*gz ]bX]j ]Xi U`UbX [ fci d`dfc[ fUa a ]b[ žUbX Ya d`cna YbhgYfj ]W\*g"Cbg]hY`ghUZcf]Ybhg`hYbUbhg`hc`]j ]b[ ]b`U`gi ddcfhjj Y`\ci g]b[ dfc[ fUa /Ugg]ghh\Ya k ]h\ \ci g]b[ !fY`UhYX ]ggi Yg/UbX dfcj ]XY`\Vf]g]g`]bhYfj Ybhjcbz`WbZ]WffYgc`i h]cbz`UbX XU]`m`]j ]b[ `Ugg]ghUbW'"F Yg]XYbhg`UfY`U`gc`fYZYffYX`hc`ch\Yf`U[ YbV]Yg`Zcf`a YX]WV`UbX XYbhU`\YU`h\ bYYXgz`a UhYf]U`bYYXgz`Y[ U`Ugg]ghUbW'z`UbX ch\Yf`bYYXg"

Dfc[fUa Ci h/n/ca Y 5V/N]Yj Ya Ybh+#%#% hc %&# %#% . DYfa UbYbhGi ddcfh]j Y < ci g]b[

A YUgi fY		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!UbbiU` 5WhiU`	5W(]Yj YX
<ci gy\c`xg'gyfj="" th="" yx``<=""><th></th><th>) \$<sup>·</sup></th><th>().</th><th>M/g<sup>-</sup></th></ci>		) \$ <sup>·</sup>	().	M/g <sup>-</sup>
9l]hYX' <cigy\c`xg%'< td=""><td></td><td>B#5<sup>-</sup></td><td>\$.</td><td>B#5<sup>-</sup></td></cigy\c`xg%'<>		B#5 <sup>-</sup>	\$.	B#5 <sup>-</sup>
<ci 'ghuv]`]hm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>( - '</td><td>M/g<sup>-</sup></td></ci>	A cbh\g	&( ·	( - '	M/g <sup>-</sup>
Hi fbcj Yf'FUHY%''	1 '	%\$ <sup>.</sup>	\$.	B#5 <sup>-</sup>
Gi WWggZi`~ <ci g]b['ci="" hwta="" td="" yg''<=""><td></td><td>()</td><td>()</td><td>M/g<sup>-</sup></td></ci>		()	()	M/g <sup>-</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>1 '</td><td>- \$<sup>·</sup></td><td>%\$\$<sup>-</sup></td><td>M/g<sup>-</sup></td></ci>	1 '	- \$ <sup>·</sup>	%\$\$ <sup>-</sup>	M/g <sup>-</sup>
Gi WW ggZi `` <ci '9 ="" '<="" ]hg="" g]b[="" td=""><td>Ι.</td><td>) \$<sup>·</sup></td><td>B#5<sup>-</sup></td><td>B#5<sup>-</sup></td></ci>	Ι.	) \$ <sup>·</sup>	B#5 <sup>-</sup>	B#5 <sup>-</sup>
<ci 5zzcfxuv]]hmuh9l]hv2<="" g]b[="" td=""><td>1 '</td><td>) \$<sup>·</sup></td><td>B#5<sup>-</sup></td><td>B#5<sup>-</sup></td></ci>	1 '	) \$ <sup>·</sup>	B#5 <sup>-</sup>	B#5 <sup>-</sup>
91]hhc' <ca td="" y'yggbygg'<=""><td>1 '</td><td>O%\$ ·</td><td>\$.</td><td>M/g<sup>-</sup></td></ca>	1 '	O%\$ ·	\$.	M/g <sup>-</sup>
Dfc[fUa 'CWWdUbWhFUhY'	1 .	-) ·	%\$\$ <sup>-</sup>	M/g <sup>-</sup>
DUgg Dfc[fUa '7Yfh]ZJVVInjcb'		DUgg WfhjZWhjcb	Bcb!7ca d`]Ubh	Bc <sup>·</sup>
BY[Uh]jYFYUgcbZcf@YUj]b['	1 .	&\$ ·	B#5 <sup>-</sup>	B#5 <sup>-</sup>
±0√07/UgY]b√Wg\]bWdaYfth\Yf h\UbYad`cmaYbHz7caYbHfmhc Yl]hcfYbXcZfYdcfh]b[dYf]cX&	Ι.	<b>'</b> \$	(, ·	M/g <sup>-</sup>
±bWfYUgY]b]bWtaYZfca Yad`cmaYbhžZfcaYbhfmhcYl]hcf YbXcZfYdcfh]b[dYf]cX&	1	%) .	%\$ <sup>-</sup>	M/g <sup>-</sup>

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX"

'Dfc:YVMX]X:bch\UjY:Ubm\cigY\c`X:YI]mg/ibUVY:hc:WUW/UhY:a YUgifY"

<sup>&</sup>amp;) \cigY\c`Xg`k YfY`YI WI XYX`Zfca a YUgi fY`Xi Y hc W]Ybhg`fYg]X]b[ ]b dfc^YVM`Ygg`h\Ub" \*) XUng"



DYf|cX. +#%#% ! %## %#%

DYfZcfa UbW. ... A YX]i a

H\]g`7<B`dfc^YVMicdYbYX`Xi f]b[: M&\$%%`Ug`U`g\VVMYfYX`g]hY`dfc^YVMik]h\ VVVdUVJmmhc`gYfj Y`&)`\ca Y`YggžX]gUV`YX`]bX]j ]Xi U`g"H\Y`dfc^YVMik Ug`Uddfcj YX`Vm<I 8`Ug`h\Y`&\$\$- `GUa Uf]hUb`6cbi g`dfc^YVMiZcf`h\Y`7c`i a Vi g`UbX`: fUb\_`]b`7ci bhm7cbh]bi i a `cZ7UfY"`GYfj ]W\*g`Zcf`h\]g`dfc^YVM'UfY`dfcj ]XYX`VmGci h\YUghž`&W\*H\]g`k]``VY`h\Y``UghmYUf`h\Uh7<B`cdYfUhYg`h\Y`@YUg]b[`Gi ddcfh]j Y`<ci g]b[`dfc[fUa"`

# Dfc[fUa 'Ci hWca Y'5Wk]Yj Ya Ybh+#%#% 'hc'%&#' %#% . 'DYfa UbYbhGi ddcffnjj Y'<ci gjb['

A YUgi fY		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!UbbiU` 5 <b>Vh</b> iU`	5 <b>W</b> ]Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" td="" yx''<=""><td></td><td>&amp;+ ·</td><td>&amp;* '</td><td>M/g<sup>-</sup></td></ci>		&+ ·	&* '	M/g <sup>-</sup>
9I]hYX´ <ci gy\c`xg%`<="" td=""><td></td><td>B#5<sup>-</sup></td><td>&amp;<sup>.</sup></td><td>B#5<sup>-</sup></td></ci>		B#5 <sup>-</sup>	& <sup>.</sup>	B#5 <sup>-</sup>
<ci 'ghuv]`]hm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( '</td><td>) \$</td><td>M/g<sup>-</sup></td></ci>	A cbh\g	&( '	) \$	M/g <sup>-</sup>
H fbcj Yf FUhY%"	1 '	%\$ <sup>·</sup>	. 1	B#5 <sup>-</sup>
Gi WWggZi`~ <ci 'ci="" g]b[="" hwta="" td="" yg'<=""><td></td><td>&amp;( ·</td><td>&amp;) ·</td><td>M/g<sup>-</sup></td></ci>		&( ·	&) ·	M/g <sup>-</sup>
Gi WWggZi`~ <ci 'ci="" g]b[="" hwta="" td="" yg'<=""><td>1 '</td><td>- \$ .</td><td>- * ·</td><td>NYg<sup>-</sup></td></ci>	1 '	- \$ .	- * ·	NYg <sup>-</sup>
Gi WWggZi `` <ci '91="" ]hg'<="" g]b[="" td=""><td>1 '</td><td>)\$'</td><td>) \$</td><td>NYg<sup>-</sup></td></ci>	1 '	)\$'	) \$	NYg <sup>-</sup>
<ci 5zzcfxuv]]hmuhi9l]h%<="" g]b[="" td=""><td>1</td><td>) \$ .</td><td>%\$\$<sup>.</sup></td><td>B#5<sup>-</sup></td></ci>	1	) \$ .	%\$\$ <sup>.</sup>	B#5 <sup>-</sup>
91]hhc' <ca td="" y'yggbygg'<=""><td>1 '</td><td>O%\$ ·</td><td>\$.</td><td>M/g<sup>-</sup></td></ca>	1 '	O%\$ ·	\$.	M/g <sup>-</sup>
Dfc[fUa 'CWWdUbWhFUhY'	1 '	-) ·	, 1 - 1	Bc <sup>·</sup>
DUgg Dfc[fUa 7Yfh]ZJVVh]cb		DUgg Wfh]Z]Wh]cb	Bcb!7ca d`]Ubh	Bc <sup>·</sup>
BY[UhjjYFYUgcb7Zcf@YUj]b[	1 .	&\$ ·	\$ <sup>.</sup>	<b>M</b> ∕g⁻
±bWfYUgY ]b WUg\ ]bWda Y fich\Yf h\Ub Ya d`cma YbHzZfca YbHfmhc Yl ]hcfYbX cZfYdcfh]b[ dYf]cX&	1 .	<b>'</b> \$'	% ·	Bc <sup>·</sup>
±bWfYUgY]b]bWtaYZfca Yad`cmaYbhžZfcaYbhfmhcYl]h cfYbXcZfYdcfh]b[dYf]cX&	Ι.	%) .	\$.	Bc <sup>·</sup>

<sup>%&#</sup>x27;A cb]hcfYXžVi hbchYj U'i UhYX"

<sup>&</sup>amp;) \ci gY\c`Xg`k YfY`YI WI XYX`Zfca 'a YUgi fY`Xi Y`hc`W]Ybhg`fYg]X]b[ ']b`dfc^YWf`Ygg`h\Ub'' \*) `XUng'''

## : M&\$&\$ Dfc[fUa '9j U'i Uh]cb

7UhY[cfm: DYfa UbYbhGi ddcfh]j Y'<ci g]b['5[YbWh: 7ca a i b]hm<ci g]b['BYhk cf\_'

 Dfc[fUa ."
 Bcfh &&bX GhfYYh

 DYf]cX.
 +#%#% ! %&# %#%

DYfZcfa UbW. A YX]i a

7<BNJ Bcfth &&bx GlfYYh5dUfha Ybhg dfcj ]XYg" \$ i b]hg cZdYfa UbYbh\ci g]b[ "]b\_YX hc gcWJUž\YU h\žUbX Ya d`cna YbhgYfj ]Wg Zcf X]gUV YX a Yb UbX k ca Yb k\c UfY Yl dYf]YbWJb[ \ca Y YggbYgg"Gi ddcffnj Y gYfj ]Wg dfcj ]XYX VmBUhjcbU 7\i fWk F Yg]XYbWg YbUV Y fYg]XYbhg hc Z]bX k cf\_ža U]bhU]b h\Y]f hfYUha YbhUbX fYWtj YfmUbX Yj Ybhi U`m[ ]j Y VUW\_ hc h\Y Wta a i b]hm\H\Y fUb[ Y cZgYfj ]Wg Uj U]`UV Y h\fci [\fyg]XYbha UbU[ Yf UbX Wta a i b]hm\UgYX WgY a UbU[ Yfg ]bWi XY \YU'h\ WfY fYZYffU'gžWgY a UbU[ Ya Ybhž`]ZY g\_]``gža cbYm a UbU[ Ya Ybhža YbhU`\YU'h\ UggYgga Ybhžgi VghUbW UVi gY UggYgga YbhžYa d`cna Ybh fYZYffU'gža YX]Wlh]cb a cb]hcf]b[ žUbX ]bX]j ]Xi U` Wti bgY`]b[ "5b cbg]hY fYg]XYbha UbU[ Yf Uggi fYg gYW f]hmUbX UWWgg hc ghUZZZcf U``fYg]XYbhg"

Dfc[fUa Ci hMta Y 5VN]Yj Ya Ybh+#%#% hc %&# %#% . DYfa UbYbhGi ddcfhjj Y <ci gjb[

A YUgi fY		GYa ]!Ubbi ປົ	GYa ]!Ubbi ປົ	5 <b>//\</b> ]Yj YX <sup>.</sup>
		; cƯ <sup>.</sup>	5 <b>VM</b> U	_ •
<ci gy\c`xg'gyfj="" td="" yx``<=""><td>٠</td><td>1-1-2</td><td>' &amp; `</td><td>M∕g<sup>·</sup></td></ci>	٠	1-1-2	' & `	M∕g <sup>·</sup>
9I]hYX' <ci gy\c`xg%'<="" td=""><td></td><td>B#5<sup>-</sup></td><td>&amp;<sup>.</sup></td><td>B#5<sup>-</sup></td></ci>		B#5 <sup>-</sup>	& <sup>.</sup>	B#5 <sup>-</sup>
<ci 'ghuv]`]hm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( '</td><td>(+.</td><td>M/g<sup>·</sup></td></ci>	A cbh\g	&( '	(+.	M/g <sup>·</sup>
Hi fbcj Yf FUHY**	1 '	%\$ <sup>.</sup>	+ .	B#5 <sup>-</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>٠,</td><td>'\$'</td><td>' %'</td><td>M/g<sup>-</sup></td></ci>	٠,	'\$'	' %'	M/g <sup>-</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>1 '</td><td>- \$</td><td>- + ·</td><td>M/g<sup>-</sup></td></ci>	1 '	- \$	- + ·	M/g <sup>-</sup>
Gi WWggZi `` <ci '9 ="" ]hg'<="" g]b[="" td=""><td>1 '</td><td>) \$ .</td><td>) \$ .</td><td>M/g<sup>-</sup></td></ci>	1 '	) \$ .	) \$ .	M/g <sup>-</sup>
<ci 527cfxuv]`]lmuh9l="" ]h<sup="" g]b[="">@</ci>	1 '	) \$ .	B#5 <sup>-</sup>	B#5 <sup>-</sup>
91]hhc < ca Y YggbYgg	1 '	O%\$ ·	\$.	M/g <sup>·</sup>
Dfc[fUa 'CWW/dUbWhFUh/'	1	-) ·	%\$\$ <sup>*</sup>	M∕g <sup>·</sup>
DUgg Dfc[fUa 7Yfh]ZJWh]cb		DUgg Wfh]Z]Wh]cb	Bcb!7ca d`]Ubh	Bc <sup>·</sup>
BY[Un]jYFYUgcbZcf@YUj]b[	1	&\$ ·	) \$ <sup>·</sup>	Bc.
±bVfYUgY]bVVg\]bVv&aYfth\YfTh\Ub Yad`cnaYbHzTcaYbHmhcYl]hcf YbXcZfYdcfh]b[dYf]cX&	1 .	· \$`	()	M/g <sup>-</sup>
±bWfYUgY]b]bWtaYZfca Yad`cnaYbhzZfcaYbhfnhcYl]hcf YbXcZfYdcfh]b[dYf]cX&	1	%) .	1 .	Bc <sup>·</sup>

%"A cb]hcfYXžVi hbchYj U'i UhYX""

``<ci gY\c`X`YI ]hYX`k ]h\``\$ ]bWta Y`UbX``\$ fYbhUhYI ]hYi bUV`Y`hc`WU`WI`UhY`a YUgi fY"

<sup>&</sup>amp;" \cigY\c`XgkYfYYIWIXYXZfca a YUgifYXiYhcW]YbhgfYg]X]b[]bdfcYVMYYggh\Ub"\*) XUng"



7UHY [cfm DYfa UbYbhGi ddcfh] Y < ci g]b[ 5[YbWh 7ca a i b]hm < ci q]b[ BYhk cf\_

Dfc[fUa ." HYffUW D`UW DYfcX." +#%#% ! %## %#%

DYfZcfa UbW. · · <][\

7<Bidfcj ]XYX" ' ghi X]c UdUfha Ybhg Uhi]hg Bcfh\ <][\GhfYYhdfcYVhiZcfa Yb UbXik ca Yb Yl dYf]YbV]b[ \ca Y`YggbYggž]bWi X]b[ h\cgYX]gUV`YX`Vma YbhU`]``bYggžgi VghUbW`UVi gYžcfXi U``X]U[ bcg]g" \&\$%+ž7<B HYffUW`D`UW`fYd`UWX`Bcfh\ <][\GhfYYhUbX`UXXYX`%( \ca Y`Ygg`i b]hg`UbX`%' bcb!\ca Y`Ygg`i b]hg`Zcf'UhchU`cZ\*\$ i b]hg''`

GYfj ]Wyg ]bWi XY ci ffYUW zgYfj ]W Yb[ U[ Ya Ybhz Ugg]ghUbW k ]h [ cU d Ubb]b[ žVWgY a UbU[ Ya Ybhz hYUha YbhUbX a YbhU \YUh gYfj ]Wgz ]bX]j ]Xi U UbX [ fci d dfc[ fUa a ]b[ ž UbX Ya d cma YbhgYfj ]Wg" 6UgYX cb h Y GhU[ Yg cZ 7 \ Ub[ Y a cXY zh Y Ybj ]fcba YbhcZYfg ck XYa UbX dfc[ fUa a ]b[ h UhU ck g fYg]XYbhg hc dUfh]WJdUhY ]b 5 w \c \] Wg 5bcbma ci gz j cWh]cbU wti bgY ]b[ za cbYma UbU[ Ya YbhUbX ]ZY g\_] g WUggYgzfY Uh]cbg ]d Vi ] X]b[ z UbX gcW]U UbX "Y]gi fY UMjj ]h]Yg" 7cbWtfX 7ci bgY ]b[ dfcj ]XYg h Y df]a Ufmgci fW cZgi ddcfhZcf fYg]XYbhg h fci [ \ h Y GYfj ]W 9b[ U[ Ya YbhGdYV]U ]ghk \ c Ugg]ghg hYbUbhg k ]h "]b\_U[ Yg hc VYbYZ]hgzWf]g]g a UbU[ Ya Ybhz UbX fYZYffU g hc hYUha Ybhcf[ Ub]nUh]cbg UbX j cWh]cbU dfc[ fUa g" 7 < B gYfj Yg Ug h Y Vi ] X]b[ XYj Y cdYf UbX a UbU[ Yf"

Dfc[fUa Ci h/k/a Y 5V/k]/y Ya Ybh+#%#% hc %&# %#% . DYfa UbYbhGi ddcfhjj Y <ci g]b[

Die [Tod Citived 1 3VK] if the initial to the initial control of the				
A YUgi fY <sup>.</sup>		GYa ]!Ubbi ປ΄ ; cປ΄	GYa]!Ubbi U' 5 <b>Vh</b> i U'	5W(]Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" th="" yx'<=""><th>,</th><th>) &amp;<sup>·</sup></th><th>(+</th><th>NYg<sup>·</sup></th></ci>	,	) & <sup>·</sup>	(+	NYg <sup>·</sup>
9l]hYX' <cigy\c`xg%'< td=""><td></td><td>B#5<sup>.</sup></td><td>%</td><td>B#5<sup>-</sup></td></cigy\c`xg%'<>		B#5 <sup>.</sup>	%	B#5 <sup>-</sup>
<ci "ghuv]`]hm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>* &amp; `</td><td>M∕g<sup>·</sup></td></ci>	A cbh\g	&( ·	* & `	M∕g <sup>·</sup>
Hi fbcj Yf'FUhY%''	1 '	%\$ ·	& <sup>.</sup>	B#5 <sup>-</sup>
Gi WWggZi`~ <ci 'ci="" g]b[="" hwta="" td="" yg'<=""><td>,</td><td>(+.</td><td>(* '</td><td>M∕g<sup>·</sup></td></ci>	,	(+.	(* '	M∕g <sup>·</sup>
Gi WWggZi` <ci ci="" g]b[="" hwta="" td="" yg<=""><td>Ι.</td><td>- \$</td><td>%\$\$<sup>·</sup></td><td>M∕g<sup>·</sup></td></ci>	Ι.	- \$	%\$\$ <sup>·</sup>	M∕g <sup>·</sup>
Gi WWggZi` <ci g]b['9l]hg'<="" td=""><td>Ι.</td><td>) \$<sup>·</sup></td><td>B#5<sup>-</sup></td><td>B#5<sup>-</sup></td></ci>	Ι.	) \$ <sup>·</sup>	B#5 <sup>-</sup>	B#5 <sup>-</sup>
<ci 5zzcfxuv]]lmuh9l]l%<="" g]b[="" td=""><td>Ι'</td><td>) \$ .</td><td>B#5<sup>-</sup></td><td>B#5<sup>-</sup></td></ci>	Ι'	) \$ .	B#5 <sup>-</sup>	B#5 <sup>-</sup>
9l]hhc' <ca td="" y'yggbygg'<=""><td>Ι.</td><td>O%\$ ·</td><td>&amp;<sup>.</sup></td><td>M∕g<sup>·</sup></td></ca>	Ι.	O%\$ ·	& <sup>.</sup>	M∕g <sup>·</sup>
Dfc[fUa 'CWW dUbWhFUhY'	Ι'	-) ·	- * ·	M∕g <sup>·</sup>
DUgg Dfc[fUa 7Yfh]Z]VVIh]cb		DUgg WfhjZjWhjcb	Bcb!7ca d`]Ubh	Bc <sup>·</sup>
BY[Un]jYFYUgcb7zcf@YUj]b[''	Ι,	&\$ ·	B#5 <sup>-</sup>	B#5 <sup>-</sup>
±bWfYUgY]bWg\]bWdaYfth\Yf h\UbYad`cmaYbhŁZfcaYbhfmhc Yl]hcfYbXcZfYdcfn]b[dYf]cX82	Ι .	<b>'</b> \$'	+' '	M/g <sup>-</sup>
±bWfYUgY ]b ]bWta Y Zfca Ya d`cna Ybhïzfca Ybhfmhc Yl ]hcf YbX cZfYdcfh]b[ 'dYf]cX&z	1	%) .	%& <sup>-</sup>	<b>M</b> ∕g⁻

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX""

&) \cigY\c`Xg`k YfY`YI WI XYX`Zfca a YUgi fY`Xi Y`hc`W]Ybhg`fYg]X]b[`]b`dfc^YWh`Ygg`h\Ub'' \*) `XUng''

7ca a i b]lmkci g]b[ BYlkcf\_l HYffUW D'UW

<sup>∵′%</sup>XYVMTUgYX'\cigY\c`X'kUg`YIWIXYX'2fca a YUgifY"ĎfcŽYMMgcb`mŶI]h≆]b∶gca Ў´∫bghUbWfgʻa YUgifY'Wti`X'bchVY` WUWTVI`UhYX

# : M&\$&\$ Dfc[fUa '9j U'i Uhjcb'

7UhY[cfm DYfa UbYbhGi ddcfh]j Y < ci g]b[ 5[YbWh 7ca a i b]hm < ci g]b[ BYhk cf\_

 Dfc[fUa .
 DUfgcbg 5j Ybi Y

 DYfcX.
 +#%#% ! %# %#%

DYfZcfa UbW. ... A YX]i a

7ca a i b]hm<ci g]b[ BYhk cf\_NgrDUfgcbg 5j Ybi Y'UdUfha Ybhg'cZYf'dYfa UbYbhgi ddcfh]j Y'\ci g]b[ Zcf'X]gUV'YX'a Yb'k \c' UfY Yl dYf]YbV]b[ \ca Y'YggbYgg"Hk Ybhn!Z]j Y'UdUfha Ybhg'UfY'dfcj ]XYX']b'U'Vi ]'X]b[ 'h\Uh'U'gc']bWi XYg'Wfa a i bU'``]j ]b[ 'UbX'gi ddcfh]j Y'gYfj ]W'g'gdUW'''GYfj ]W'g']bWi XY'ci HfYUW\z'gYfj ]W'Yb[ U[ Ya Ybhz'Ugg]ghUbW'k ]h\ [ cU' d`Ubb]b[ z'WlgY'a UbU[ Ya Ybhz'hfYUha YbhUbX'a YbhU'\YU'h\ gYfj ]W'gz']bX]j ]Xi U' UbX' [ fci d'dfc[ fUa a ]b[ z' UbX'Ya d'cna YbhgYfj ]W'g''6UgYX'cb'h\Y'GhU[ Yg'cZ7\Ub[ Ya cXY'z'h\Y'ybj ]fcba YbhcZYfg'ck XYa UbX'dfc[ fUa a ]b[ 'h\Uh'U'ck g'fYg]XYbhg'hc'dUfh]WdUhY']b'5'Wt\c' ]Wg'5bcbna ci gz'j cWlhjcbU' Wti bgY']b[ z'a cbYma UbU[ Ya YbhUbX``]ZY'g\_]`g'WUggYgz'fY`Uhjcbg\]d'Vi ]'X]b[ z'UbX'gcV]U' UbX``Y]gi fY'UW[j] Jh]Yg''GYfj ]W'g'UfY'dfcj ]XYX'h\fci [ \'U'dUffbYfg\]d'k ]h\ Gci h\YUghz'\d'yg' df]a Ufm\Wgy'a UbU[ Ya YbhUbX'a YbhU'`\YU'h\ UbX'W\Ya ]W'XYdYbXYbWhWti bgY`]b[ Zcf'fYg]XYbhg'bchfYW]j ]b[ 'h\YgY'gYfj ]W'g'Zfca 'Ubch\Yf'U[ YbWh'i

Dfc[fUa Ci h/k/a Y 5Vk]/Yj Ya Ybh+#%#% hc %&# %#%. DYfa UbYbhGi ddcfh]j Y < ci g]b[

A YUgi fY		GYa ]!Ubbi ປ΄ ; cປ΄	GYa]!UbbiU' 5VMU'	5 <b>W</b> (]Yj YX
<ci gy\c`xg'gyfj="" th="" yx'<=""><th></th><th>&amp;+ ·</th><th>&amp;* ·</th><th>NYg<sup>-</sup></th></ci>		&+ ·	&* ·	NYg <sup>-</sup>
9l ]hYX <ci gy\c`x%<="" td=""><td></td><td>B#5<sup>-</sup></td><td>1 ·</td><td>B#5<sup>-</sup></td></ci>		B#5 <sup>-</sup>	1 ·	B#5 <sup>-</sup>
<ci 'ghuv]`]hm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>' ( '</td><td>M/g<sup>-</sup></td></ci>	A cbh\g	&( ·	' ( '	M/g <sup>-</sup>
Hi fbcj Yf'FUhY%'	1 '	%\$ <sup>·</sup>	%& <sup>·</sup>	B#5 <sup>-</sup>
Gi WWggZi `` <ci 'ci="" g]b[="" hwta="" td="" yg'<=""><td></td><td>&amp;( ·</td><td>&amp;' ·</td><td>M/g<sup>-</sup></td></ci>		&( ·	&' ·	M/g <sup>-</sup>
Gi WWggZi `` <ci 'ci="" g]b[="" hwta="" td="" yg'<=""><td>1 '</td><td>- \$<sup>·</sup></td><td></td><td>M/g<sup>-</sup></td></ci>	1 '	- \$ <sup>·</sup>		M/g <sup>-</sup>
Gi W M gg 1 ``< ci g]b[ '9  ]hg	1 '	) \$ <sup>·</sup>	\$.	Bc <sup>·</sup>
<ci '5zzcfxuv]`]hmuh9l="" ]hav<="" g]b[="" td=""><td>1 '</td><td>) \$<sup>·</sup></td><td>B#5<sup>-</sup></td><td>B#5<sup>-</sup></td></ci>	1 '	) \$ <sup>·</sup>	B#5 <sup>-</sup>	B#5 <sup>-</sup>
9l]hhc' <ca td="" y'yggbygg'<=""><td>Ι,</td><td>O%\$ ·</td><td>\$<sup>.</sup></td><td>M/g<sup>-</sup></td></ca>	Ι,	O%\$ ·	\$ <sup>.</sup>	M/g <sup>-</sup>
Dfc[fUa 'CWW dUbWhFUhY'	1 '	- ) ·	,	Bc <sup>·</sup>
DUgg Dfc[fUa 7Yfh]ZJVVh]cb		DUgg W <b>rft]Z]Wilt]</b> cb	Bcb!7ca d`]Ubh	Bc <sup>·</sup>
BY[Un]jYFYUgcbZcf@YUj]b[	Ι,	&\$ ·	1.1.	Bc <sup>·</sup>
±bWfYUgY]bWlg\]bWdaYfth\Yf h\UbYad`cnaYbHz7fcaYbHfmhc Yl]hcfYbXcZfYdcfh]b[dYf]cX	I .	<b>'</b> \$	(' '	<b>M</b> ∕g <sup>·</sup>
±bWfYUgY]b]bWtaYZfca Yad`cmaYbhžZfcaYbhfmhcYl]hcf YbXcZfYdcfh]b[dYf]cX	Ι .	% .	( .	Bc <sup>·</sup>

%"A cb]hcfYXžVi hbchYj U'i UhYX""

& Dfc/YVMX]X bch\Uj Y'Ubmgi WWggZi ``\ci g]b[ YI]hg/i bUV'Y hc WU'VI/`UhY a YUgi fY"

<sup>· &</sup>quot;· \ci gY\c`Xg`k YfY`YI Wî XYX`Zfca a YUgi fY`Xi Y`hc`W]Ybhg`fYg]X]b[ `]b`dfc^YVlh`Ygg`h\Ub " \*) `XUng"`



7UhY[cfm DYfa UbYbhGi ddcfh]j Y < ci g]b[ 5[YbWm 7ca a i b]hm < ci q]b[ BYhk cf\_

Dfc[fUa. FYVi] X]b[@j Yg D57HHYUa ₺]h]Uh]j Y

DYf]cX. +#%#% ! %%# %#%

DYfZcfa UbW. A YX]i a

H.Y.F.YVI ]X]b[ @j Yg DUWiHYUa &jhJuhj Y ff @DHek Ug cbY cZYYj Yb dfc Ywfg Zi bXYX Ug dufn cZh.Y ZYXYfU '7c `Uvcfuhj Y &jhJuhj Y hc '9bX < ca Y YggbYgg "F @DHehuf[ Yhg `cb[ !hYfa \ca Y Ygg a Yb UbX k ca Yb k ]h. gYf]ci g a YbhU ]`bYgg k \c a UmU gc `Uj Y Wt!cwW ff]b[ gi VghUbW 'Uvi gY dfcV Ya g 'UbX#cf d\ng]\W ]`bYgg Yg cf X]gUV]`jhJyg "H.Y dfc Ywf]bWi XYg , \$ i b]hg cZgi ddcfhj Y \ci g]b[ ža UghYf `YUgYX UhZj Y g]hYg Vmh\Y 7ca a i b]hm<ci g]b[ BYhk cf\_" H.Y dfc[ fUa `\Ug U fYg]XYbha UbU[ Yf UbX Gci h.YUghž &W'dfcj ]XYg U a i `hJ!X]gWJd`]bUfmhYUa cZdf]a Ufm\YU'h. WbfYža YbhU`\YU'h. UbX gi VghUbW 'Uvi gYžVYbYZJhg`]b\_U[ YžUbX \ci g]b[ dfcZYgg]cbU'g h.Uhi hj`]nY Yj ]XYbWX!VUgYX dfUMJW g hc XY`]j Yf gYfj ]W g hc WJYbhg ]b h.Y]f \ca Yg UbX h.Y Wta a i b]hm' < ci g]b[ dfcj ]XYX Vmh\Y 7ca a i b]hm < ci g]b[ BYhk cf\_ cdYbYX ]b` A UfW. &\$\$( "H.)g k ]` VY h.Y`UghnYUf h.Uh7 < B cdYfUhYg h.Y F @DHedfc[ fUa "

Dfc[fUa Ci h/ka Y 5Vk]Yj Ya Ybh+#%#% hc %&# %#%. DYfa UbYbhGi ddcfhjj Y <ci g]b[

A YUgi fY		GYa]!Ubbi U` ; cU`	GYa]!Ubbi U` 5V <b>h</b> i U`	5 <b>W</b> (]Yj YX
<ci gy\c`xg'gyfj="" th="" yx''<=""><th></th><th></th><th>++ .</th><th>Bc<sup>·</sup></th></ci>			++ .	Bc <sup>·</sup>
9l]hYX' <cigy\c`xg%'< td=""><td></td><td>B#5<sup>-</sup></td><td>* '</td><td>B#5<sup>·</sup></td></cigy\c`xg%'<>		B#5 <sup>-</sup>	* '	B#5 <sup>·</sup>
<ci g]b[="" ghuv]`]hm<="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>* \$ '</td><td>M/g<sup>·</sup></td></ci>	A cbh\g	&( ·	* \$ '	M/g <sup>·</sup>
Hi fbcj Yf'F UhY%''	1 .	%\$ <sup>.</sup>	,	B#5 <sup>·</sup>
Gi WWggZi `` <ci 'ci="" g]b[="" hwta="" td="" yg'<=""><td></td><td>+- '</td><td>+) .</td><td>M/g<sup>·</sup></td></ci>		+- '	+) .	M/g <sup>·</sup>
Gi WWyggZi `` <ci 'ci="" g]b[="" hwta="" td="" yg&'<=""><td>1 .</td><td>- \$</td><td> ·</td><td>M/g<sup>·</sup></td></ci>	1 .	- \$	·	M/g <sup>·</sup>
Gi WWggZi `` <ci '9 ="" ]hg&'<="" g]b[="" td=""><td>1 .</td><td>) \$ .</td><td>, \$</td><td>M/g<sup>·</sup></td></ci>	1 .	) \$ .	, \$	M/g <sup>·</sup>
<ci '572cfxuv]`]hmuh'9l="" '<="" ]h'@(="" g]b[="" td=""><td>1 .</td><td>) \$ .</td><td>%\$\$<sup>.</sup></td><td>B#5<sup>·</sup></td></ci>	1 .	) \$ .	%\$\$ <sup>.</sup>	B#5 <sup>·</sup>
91]hhc <a td="" y`yggbygg<=""><td>1 .</td><td>O%\$ ·</td><td>%</td><td>M/g<sup>·</sup></td></a>	1 .	O%\$ ·	%	M/g <sup>·</sup>
Dfc[fUa 'CWW dUbWhFUhY'	1 .	-) ·	, ) .	Bc <sup>·</sup>
DUgg Dfc[fUa 7Yfh]ZJVVInjcb		DUgg WfhjZjwlhjcb	Bcb!7ca d`]Ubh	Bc <sup>·</sup>
BY[Uh]jYFYUgcb7Zcf*@YUj]b[&	1 .	&\$ ·	&\$ ·	M/g <sup>·</sup>
±bWfYUgY]bWlg\]bWtaYfth\Yf h\UbYad`cmaYbhtZfcaYbhfmhc Yl]hcfYbXcZfYdcfn]b[dYf]cX&z	1	<b>'</b> \$	&- ·	M∕rg <sup>·</sup>
±bWfYUgY]b]bWtaYZfca Yad`cmaYbhïZfcaYbhfmhcYl]hcf YbXcZfYdcfh]b[dYf]cX&²	1	%) .		Вс

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX""

& %XYWUgYX W]Ybhk Ug YI WI XYX Zfca a YUgi fY"

('&'\ci gY\c'Xg'k]h\'`\$']bWta Y'UbX``\$'fYbh'Uh'Yl]hk YfY'Yl Wl XYX'Zfca 'WU'W\'Uh]cb"

<sup>&#</sup>x27;%'∖cigY∖c`Xgʻk YfYʻYİ Wi XYXʻ2fca ʻa YUgi fYʻXi Yʻhc W]YbhgʻfYg]X]b[']bʻdfc-YWh`Yggʻh∖Ubʻ'\*) XUngi"

# : M&\$&\$ Dfc[fUa '9| U'i Uh]cb

7UhY[cfm DYfa UbYbhGi ddcfh]j Y < ci g]b[ 5[YbWh 7ca a i b]hm < ci g]b[ BYhk cf\_

Dfc[fUa." GUZY < Uj Yb

DYf]cX. +#%#% ! %%# %#%

DYfZcfa UbW." < ][\"

7<Br/>
Rig GUZY < Uj Yb dfc[fUa ]g XYg][bYX hc gYfj Y Xi U X]U[bcgYX a Yb UbX k ca Yb k]h\ UWij Y UXX]Wi]cbg Ug k Y Ug U a YbhU YU h\ X]gUV]]hmUbX k \c UfY YI dYf]YbVjb[ \ca Y YggbYgg" 6UgYX cb h\ Y GhU[Yg cZ7\Ub[Y a cXY zh\ Y dfc YWidfcj]XYg '' UdUfha Ybhg h\ UhWib \ci gY i d hc '% Y][]V Y hYbUbhg" \delta dUfhbYfg\]d k]h\ 7cbWfX 7ci bgY]b[ 'GYfj]Wgzh\ Y dfc[fUa cZYfg U Z ``fUb[Y cZgi ddcfhjj Y gYfj]Wg UbX fYZYffU gz]bWi X]b[ 'Wti bgY]b[ zwwgY a UbU[Ya YbhzXfi [ 'UbX U Wt\c 'hfYUha Ybhz'j cwwh]cbU 'UbX Ya d'cna YbhgYfj]WgzfYZYffU g Zcf a YX]WU UbX XYbhU 'WwfYz ]ZY g\_] `g hfU]b]b[ zvi X[ Yh]b[ 'Ugg]ghUbW za UhYf]U 'UbX Ya Yf[ YbWh ZccX 'Ugg]ghUbW zugg]ghUbW ']b UwWygg]b[ 'VYbYZ]hgz UbX 'hfUbgdcfhUh]cb 'Ugg]ghUbW" Cbg]hY ghUZCcf]Ybhg 'hYbUbhg 'hc ``j ]b[ ']b U gi ddcfhj Y \ci g]b[ 'dfc[fUa / Ugg]ghh\ Ya k]h\ \ci g]b[! fY'UhYX ]ggi Yg/UbX 'dfcj ]XY 'Wi]g]g ']bhYfj Ybh]cbz WtbZ]WifYgc`i h]cbz UbX 'XU] m`]j ]b[ 'Ugg]ghUbW" 7<B gYfj Yg Ug h\ Y Vi ]X]b[ XYj Y`cdYf 'UbX a UbU[Yf"

## Dfc[fUa Ci h/kta Y 5VK]Yj Ya Ybh+#%#% hc %&# %#%. DYfa UbYbhGi ddcfh]j Y < ci q]b[

A YUgi fY		GYa ]lUbbi ປີ ; cປີ	GYa]!Ubbi Uʻ 5 <b>Vh</b> i Uʻ	5 <b>V\()</b> Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" td="" yx'<=""><td></td><td>%+ ·</td><td>%( '</td><td>Bc<sup>·</sup></td></ci>		%+ ·	%( '	Bc <sup>·</sup>
9I]hYX' <ci gy\c`xg%'<="" td=""><td></td><td>B#5<sup>-</sup></td><td>%</td><td>B#5<sup>-</sup></td></ci>		B#5 <sup>-</sup>	%	B#5 <sup>-</sup>
<ci "ghuv]`]hm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>* .</td><td>M/g<sup>·</sup></td></ci>	A cbh\g	&( ·	* .	M/g <sup>·</sup>
Hi fbcj Yf'FUhY%'	Ι.	%\$ <sup>·</sup>	. 1	B#5 <sup>-</sup>
Gi WWggZi`~ <ci 'ci="" g]b[="" hwta="" td="" yg'<=""><td></td><td>%) .</td><td>% .</td><td>M/g<sup>·</sup></td></ci>		%) .	% .	M/g <sup>·</sup>
Gi WWggZi `` <ci 'ci="" g]b[="" hwta="" td="" yg&'<=""><td>Ι.</td><td>- \$</td><td>%\$\$<sup>.</sup></td><td>M/g<sup>·</sup></td></ci>	Ι.	- \$	%\$\$ <sup>.</sup>	M/g <sup>·</sup>
Gi WWggZi `` <ci '91="" ]hg&'<="" g]b[="" td=""><td>Ι.</td><td>) \$<sup>·</sup></td><td>B#5<sup>-</sup></td><td>B#5<sup>-</sup></td></ci>	Ι.	) \$ <sup>·</sup>	B#5 <sup>-</sup>	B#5 <sup>-</sup>
<ci '5zzcfxuv]`]hmuh9l="" ]h%<="" g]b[="" td=""><td>Ι.</td><td>) \$<sup>·</sup></td><td>B#5<sup>-</sup></td><td>B#5<sup>-</sup></td></ci>	Ι.	) \$ <sup>·</sup>	B#5 <sup>-</sup>	B#5 <sup>-</sup>
91]hhc < ca Y.YggbYgg	Ι.	O%\$ ·	B#5 <sup>-</sup>	B#5 <sup>-</sup>
Dfc[fUa 'CWW dUbWhFUhY'	Ι.	- ) ·	%\$\$ <sup>.</sup>	M/g <sup>·</sup>
DUgg Dfc[fUa 7Yfh]ZJVVh]cb		DUgg Wfh]Z]Wh]cb	Bcb!7ca d`]Ubh	Bc <sup>·</sup>
BY[Uh]jYFYUgcb7Zcf*@YUj]b[&*	Ι.	&\$ ·	B#5 <sup>-</sup>	B#5 <sup>-</sup>
±5VfYUgY]bVVg\]bVvtaYfch\Yf h\UbYad`cmaYbHzZfcaYbHfmhc Yl]hcfYbXcZfYdcfh]b[dYf]cX&⊄	1	' \$ <sup>·</sup>	*('	M∕g <sup>·</sup>
±bWfYUgY]b]bWtaYZfca Yad`cmaYbbtZfcaYbhfmhcYl]hcf YbXcZfYdcfh]b[dYf]cX&⊄	Ι.	%) .	% .	M/g <sup>·</sup>

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U`i UhYX""

<sup>&</sup>amp;'%XYVM'UgYX'\cigY\c'X'kUg'YIWTXYX'Zfca'a YUgifY"'Dfc^YVMfg'cb`mYI]hž]b'gcaY']bghUbWfg'aYUgifY'Wti'X'bchVY' WU'W'\UhYX"'

<sup>`</sup>Bc`\cigY\c`X'YI]hg/ibUV'Yhc'WUW\`UhYaYUgifY"``

<sup>(&#</sup>x27;&'\cigY\c'Xg'kYfY'YlWiXYX'Zfca 'a YUgifY'XiY'hc'W]Ybhg'fYg]X]b[']b'dfc'YVM'Ygg'h\Ub''\*) 'XUng'''



7UHY [cfm DYfa UbYbhGi ddcfh] Y < ci g]b[ 5[YbWh 7ca a i b]hm < ci q]b[ BYhk cf\_

**Dfc[fUa**." GF 5

DYf]cX. +#%#% ! %&# %#%

DYfZcfa UbW. A YX]i a

7<B Gdcbgcf!VUgYX FYbHJ`5gg]gHUbW fGF 5Edfcj ]XYg'&\$, i b]hgj ]U'U'<I 8 dYfa UbYbh gi ddcfhj Y'\ci g]b[ [fUbh''H\Y'H\Jf Yhdcdi `Uh]cb ]bWi XYg'j Yfm`ck ]bWta Y'dYfgcbg'k \c' UfY`\ca Y`Ygg'UbX X]gUV`YX VmgYj YfY a YbHJ`]``bYgg UbX#cf W\Ya ]WU`XYdYbXYbWta`UbX'h\Y]f` ZJa ]ma Ya VYfg"'7<B cZZYfg'fYbhgi Vg]X]Yg'hc \ca Y`Ygg'dYfgcbg'fYZYffYX Vmci HYUW\\HYUa gz'g\Y`hYfgz'UbX'h\Y]f` dUffbYf]b[ 'gYfj ]W' dfcj ]XYfg"'`Gi ddcfhj Y'gYfj ]W'g'UfY Uj U]`UV`Y`]b`h\Y Wta a i b]mz'h\fci [\h\Y'dfcj ]XYf'h\Uhh\Y'W]Ybh]g``]b\_YX'k]h\ UhYbHm]bhc h\Y'dfc[ fUa "GHJfh]b[ 'si `m'\ze &\$\% z'h\Y'GF 5'dfc[ fUa `UXXYX'\%( 'i b)]hg'dfYj ]ci g`m\WJgg]Z]YX'i bXYf'h\Y'GF 5&'dfc[ fUa "GHJfh]b[ 'si `m'\ze &\$\% z'h\Y'GF 5'dfc[ fUa `UXXYX'\%i b]hg'dfYj ]ci g`m\WJgg]Z]YX'i bXYf'h\Y'GF 5' dfc[ fUa z'fU]g]b[ 'h\Y'hchU` bi a VYf'cZi b]hg'hc &\$, "`GhJfh]b[ 'GYdhYa VYf'&\$\% z' qca Y'W]Ybhq'fYW]j Y'WJqY'a UbU[ Ya YbhqYfj ]W'g'h\fci [\\'<ca YZi ``"

Dfc[fUa Ci h/ka Y 5Vk]Yj Ya Ybh+#%#% hc %&# %#%. DYfa UbYbhGi ddcfhjj Y <ci g]b[

DICTUA CINVCA Y SVIKJYJ YA YDN	+#/0#/0- 11	5 700x# 70#76 Dila (	JUTUING CUCITY 1 <	ci gjb[
A YUgi fY <sup>.</sup>		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!UbbiU` 5V <b>h</b> iU`	5 <b>VN</b> ]Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" th="" yx''<=""><th></th><th>&amp;&amp;- <sup>'</sup></th><th>% \$<sup>.</sup></th><th>Bc<sup>*</sup></th></ci>		&&- <sup>'</sup>	% \$ <sup>.</sup>	Bc <sup>*</sup>
91 ]h/X '< ci gY\c`Xg%'		B#5 <sup>-</sup>	%* ·	B#5 <sup>-</sup>
<ci 'ghjv]`]lm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>(+.</td><td>M/g<sup>-</sup></td></ci>	A cbh\g	&( ·	(+.	M/g <sup>-</sup>
H fbcj Yf'FUhY%''	Ι.	%\$ <sup>.</sup>		B#5 <sup>-</sup>
Gi WWYggZl`` <ci g]b['ci="" hvta="" td="" yg'<=""><td></td><td>&amp;\$* ·</td><td>%+( ·</td><td>Bc<sup>*</sup></td></ci>		&\$* ·	%+( ·	Bc <sup>*</sup>
Gi WWYggZl`` <ci g]b['ci="" hvta="" td="" yg''<=""><td>1 .</td><td>- \$<sup>·</sup></td><td>- + ·</td><td>M/g<sup>-</sup></td></ci>	1 .	- \$ <sup>·</sup>	- + ·	M/g <sup>-</sup>
Gi WWggZi`` <ci g]b['91]hg''<="" td=""><td>1 .</td><td>) \$ .</td><td>* + '</td><td>M/g<sup>-</sup></td></ci>	1 .	) \$ .	* + '	M/g <sup>-</sup>
<ci 5zzcfxuv]]hmuh9l]ha<="" g]b[="" td=""><td>1 .</td><td>) \$ .</td><td>%\$\$<sup>.</sup></td><td>B#5<sup>-</sup></td></ci>	1 .	) \$ .	%\$\$ <sup>.</sup>	B#5 <sup>-</sup>
91]hhc' <ca td="" y'yggbygg'<=""><td>1 .</td><td>O%\$ ·</td><td>&amp;.</td><td>M/g<sup>-</sup></td></ca>	1 .	O%\$ ·	&.	M/g <sup>-</sup>
Dfc[fUa 'CWW/dUbWhFUhY'	1 .	%\$\$ <sup>.</sup>	++ .	Bc <sup>*</sup>
DUgg Dfc[fUa '7Yfh]ZJVVh]cb'		DUgg WfhjZwhjcb	Bcb!7ca d`]Ubh	Bc <sup>*</sup>
BY[Uh]jYFYUgcbZcf@YUj]b['`	1 .	&\$ ·	%' '	M/g <sup>-</sup>
±0.WYUgY]bWUg\]bWtaYfth\Yf h\UbYad`cmaYbHcZfcaYbHfmhc Yl]hcfYbXcZfYdcfh]b[dYf]cX <sup>™</sup>	1	' \$ <sup>·</sup>	'('	M/g <sup>-</sup>
±oVfYUgY]b]bWtaYZfca Yad`cmaYbhžZfcaYbhfmhcYl]hcf YbXcZfYdcfh]b[dYf]cX <sup>*</sup>	1	%) .	) .	Bc <sup>*</sup>

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX""

7ca a i b]hm<ci q]b[ BYhk cf\_ i GF5

<sup>&</sup>amp;) `\ci gY\c`Xg`k]h\`` \$ `]bWta Y`UbX`` \$ fYbhUhYl]hk YfY`Yl Wl XYX`Zfca `WUW\`Uh]cb''

<sup>&</sup>quot;%XYWYUgYX WJYbhk Ug Yl Wi XYX Zfca a YUgi fY"

<sup>(&</sup>quot;%\ci qY\c`Xg'k YfY'Yl Wl XYX'Zfca 'a YUgi fY'Xi Y'hc'W]Ybhg'fYg]X]b[']b'dfc'YVth'Ygg'th\Ub"\*) 'XUng''

# : M&\$&\$ Dfc[fUa '9j U'i Uhjcb'

7UhY[cfm DYfa UbYbhGi ddcfh]j Y < ci g]b[ 5[YbWh 7ca a i b]hm < ci g]b[ BYhk cf\_ "

Dfc[fUa." HF5

DYf]cX. +#%#% ! '%&#' %#%- '

DYfZcfa UbW... A YX]i a

7<B HYbUbHVUgYX F YbhU '5gg]ghUbW' flHF 5Edfcj ]XYg'%+%i b]hg'j ]U'U'<I 8 dYfa UbYbh gi ddcfhjj Y'\ci g]b[ [fUbh' HYbUbhg a UmW\ccgY hc ']j Y ]b 7<B!ck bYX 'UdUfha Ybhg cf ]b UdUfha Ybhg ck bYX 'Vmch\Yf 'UbX'cfXg" H\Y hUf[ Yhdcdi `Uh]cb ]bWi XYg'j Yfm`ck ]bWa Y dYfgcbg k\c' UfY \ca Y'Ygg'UbX'X]gUV'YX 'VmgYj YfY a YbhU '] 'bYgg'UbX#cf'W\Ya ]W\'XYdYbXYbW\faUbX'h\Y]f'ZJa ] ma Ya VYfg" 7<B cZZYfg fYbhgi Vg]X]Yg'hc \ca Y'Ygg'dYfgcbg'fYZYffYX 'Vmci hfYUW\ hYUa gzg\Y'hYfgz'UbX'h\Y]f'dUfhbYf]b[ 'gYfj ]W\'dfcj ]XYfg" Gi ddcfhjj Y'gYfj ]W\g'UfY'Uj U] 'UV'Y ]b h\Y Wa a i b]mzh\fci [\ h\Y dfcj ]XYf'h\Uhh\Y W]Ybhg'fYW']j Y'WygY'a UbU[ Ya Ybhgyfj ]W\g'h\fci [\ <ca YZ ``"

Dfc[fUa Ci h/ka Y 5Vk]Yj Ya Ybh+#%#% hc %&# %#%. DYfa UbYbhGi ddcfhjj Y <ci g]b[

A YUgi fY		GYa ]!Ubbi ປົ່ ; cປົ	GYa]!UbbiU^ 5WhiU^	5 <b>W</b> (]Yj YX
<ci gy\c`xg'gyfj="" th="" yx'<=""><th></th><th>%, '</th><th>%) \$ '</th><th>Bc<sup>·</sup></th></ci>		%, '	%) \$ '	Bc <sup>·</sup>
91]hYX' <ci gy\c`xg%'<="" td=""><td></td><td>B#5<sup>-</sup></td><td>&amp;.</td><td>B#5<sup>-</sup></td></ci>		B#5 <sup>-</sup>	&.	B#5 <sup>-</sup>
<ci 'ghuv]`]lmi<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>* &amp; `</td><td>M∕g<sup>·</sup></td></ci>	A cbh\g	&( ·	* & `	M∕g <sup>·</sup>
H fbcj Yf FUhY% '	1 .	%\$ <sup>·</sup>	%	B#5 <sup>-</sup>
Gi WWggZi` <ci g]b['ci="" hwta="" td="" yg'<=""><td></td><td>%* - <sup>'</sup></td><td>%( - <sup>.</sup></td><td>Bc<sup>·</sup></td></ci>		%* - <sup>'</sup>	%( - <sup>.</sup>	Bc <sup>·</sup>
Gi WWggZi` <ci g]b['ci="" hwta="" td="" yg''<=""><td>1 .</td><td>- \$ .</td><td>%\$\$<sup>-</sup></td><td>M∕g<sup>·</sup></td></ci>	1 .	- \$ .	%\$\$ <sup>-</sup>	M∕g <sup>·</sup>
Gi WWggZi`` <ci g] b['9 ] hg''<="" td=""><td>1 .</td><td>) \$ .</td><td>%\$\$<sup>-</sup></td><td>M∕g<sup>·</sup></td></ci>	1 .	) \$ .	%\$\$ <sup>-</sup>	M∕g <sup>·</sup>
<ci '5zzcfxuv]="" ]l%<="" ]lmuh'9l="" g]b[="" td=""><td>1 .</td><td>) \$ .</td><td>%\$\$<sup>-</sup></td><td>B#5<sup>-</sup></td></ci>	1 .	) \$ .	%\$\$ <sup>-</sup>	B#5 <sup>-</sup>
91]hihci <ca td="" yiyggbyggi<=""><td>1 .</td><td>O%\$ ·</td><td>&amp;<sup>.</sup></td><td>M∕g<sup>·</sup></td></ca>	1 .	O%\$ ·	& <sup>.</sup>	M∕g <sup>·</sup>
Dfc[fUa 'CWW/dUbWhFUhY'	1 .	%\$\$ <sup>.</sup>	1 .	Bc <sup>·</sup>
DUgg Dfc[fUa '7Yfh]Z]WUh]cb'		DUgg WffjZjWljcb	Bcb!7ca d`]Ubh	Bc <sup>·</sup>
BY[Uh]jYFYUgcbZcf@YUj]b['	1 .	&\$ <sup>-</sup>	\$ <sup>.</sup>	M∕g <sup>·</sup>
±5WfYUgY]bWlg\]bWlfaYfch\Yf h\UbYad`cmaYbhLZfcaYbhfmhc Yl]hcfYbXcZfYdcfh]b[dYf]cX&z	1	<b>'</b> \$'	(%	M∕rg <sup>·</sup>
±bWfYUgY]b]bWtaYZfca Yad`cmaYbhžZfcaYbhfmhcYl]hcf YbXcZfYdcfh]b[dYf]cX&z	1	%) .	%\$ ·	M∕g <sup>·</sup>

ˈ%XYWMUgYX:\cigY\c`X:kUg:YIWIXYX:2fca a YUgifY"

<sup>%&#</sup>x27;A cb]hcfYXžVi hbchYj U'i UhYX'''

<sup>&</sup>amp; %( \cigY\c`Xg'k YfY'Yl Wl XYX'2fca a YUgi fY Xi Y hc W]Ybhg fYg]X]b[ ]b dfc YWh'Ygg h\Ub " \*) XUngi"



7UHY [cfm DYfa UbYbhGi ddcfh]j Y <ci g]b[ 5[YbWh 7ca a i b]hm<ci q]b[ BYhk cf\_

Dfc[fUa." HF5%

DYf]cX. +#%#% ! %&# %#%

DYfZcfa UbWY. " @ck "

7<B HYbUbHVUgYX F YbHJ '5gg]gHJbW' & fHF 5&Ldfcj ]XYg' &\$ i b]hg'j ]U'U' < I 8 dYfa UbYbh gi ddcfhlj Y'\ci g]b[ '[fUbH'H\Y'HJf[Yhdcdi `Uh]cb ]bWi XYg'j Yfm`ck ]bWta Y'dYfgcbg'k\c'UfY \ca Y`Ygg'UbX'X]gUV'YX VmgYj YfY a YbHJ ']``bYgg'UbX#cf'W\Ya ]WU XYdYbXYbWhzUbX'h\Y]f' ZJa ]'ma Ya VYfg'''7<B cZZYfg'fYbhgi Vg]X]Yg'hc \ca Y`Ygg'dYfgcbg'fYZYffYX Vmci HYUW\ HYUa gz'g\Y'hYfgz'UbX'h\Y]f' dUffbYf]b[ 'gYfj ]W'dfcj ]XYfg'''@YUgY!i d'VY[Ub']b'CVhcVYf'&\$% "'GHJfh]b[ ']b: M&\$&%z'h\Y'fYbHJ' gi Vg]X]Yg'k]``HfUbg]h]cb'hc'7<B Mg'bYk 'A Ufg\ '6fcc\_D'UW' dfc'YVh'''7i ffYbhHYbUbhq'k]``VY'HfUbqZYffYX'hc'h\Y'7<B HF 5'dfc'YVh''

Dfc[fUa Ci hWa Y 5VN]Yi Ya Ybh+#%#% hc %&# %#% . DYfa UbYbhGi ddcfhli Y < ci qlb[

A YUgi fY		GYa ]!Ubbi U` ; cU`	GYa]!UbbiU' 5VMiU'	5 <b>W</b> (]Yj YX
<ci gy\c`xg'gyfj="" th="" yx'<=""><th></th><th>&amp;&amp;<sup>.</sup></th><th>% .</th><th>Bc<sup>·</sup></th></ci>		&& <sup>.</sup>	% .	Bc <sup>·</sup>
9I]hYX' <ci gy\c`xg%'<="" td=""><td></td><td>B#5<sup>-</sup></td><td>%</td><td>B#5<sup>-</sup></td></ci>		B#5 <sup>-</sup>	%	B#5 <sup>-</sup>
<ci 'ghuv]`]lm'<="" g]b[="" td=""><td>A cbh\g</td><td>%) .</td><td>%\$ <sup>.</sup></td><td>Bc<sup>·</sup></td></ci>	A cbh\g	%) .	%\$ <sup>.</sup>	Bc <sup>·</sup>
H fbcj Yf FUhY%	1 .	%\$ <sup>·</sup>	) .	B#5 <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg''<=""><td></td><td>&amp;\$ ·</td><td>%+ ·</td><td>Bc<sup>·</sup></td></ci>		&\$ ·	%+ ·	Bc <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>1 .</td><td>- \$ .</td><td>- ( .</td><td>M∕g<sup>·</sup></td></ci>	1 .	- \$ .	- ( .	M∕g <sup>·</sup>
Gi WWggZi`` <ci g] b['9 ] hg'<="" td=""><td>1 .</td><td>) \$ .</td><td>\$.</td><td>Bc<sup>·</sup></td></ci>	1 .	) \$ .	\$.	Bc <sup>·</sup>
<ci 5zzcfxuv]]hmuh9l]hv²<="" g]b[="" td=""><td>1 .</td><td>) \$ .</td><td>B#5</td><td>B#5<sup>·</sup></td></ci>	1 .	) \$ .	B#5	B#5 <sup>·</sup>
91]hhc < ca Y YggbYgg	1 .	O%\$ ·	B#5	B#5 <sup>·</sup>
Dfc[fUa 'CWW/dUbWhFUhY'	1 .	-) ·	+) .	Bc <sup>·</sup>
DUgg Dfc[fUa '7Yfh]Z]WJh]cb'		DUgg WffjZwhjcb	Bcb!7ca d`]Ubh	Bc <sup>·</sup>
BY[Uh]jYFYUgcbZcf@YUj]b[	1 .	&\$ <sup>·</sup>	\$ <sup>.</sup>	M∕g <sup>·</sup>
±5VMYUgY]bVUg\]bWtaYfth\Yf h\UbYad`cmaYbHcZfcaYbHfmhc Yl]hcfYbXcZfYdcfh]b[dYf]cX&	1	<b>'</b> \$'	) + .	<b>№</b> g <sup>-</sup>
±bVfYUgY]b]bWtaYZfca Yad`cmaYbhžZfcaYbhfmhcYl]hcf YbXcZfYdcfh]b[dYf]cX&	1	%) .	\$.	Bc <sup>·</sup>

'Dfc^YVNiX]X'bchi\UjY'UbmgiWWggZi``\cigjb[YI]hg/ibUV'Y'hc'WJWI\UhY'aYUgifY'''

7ca a i b]hm<ci q]b[ BYhk cf\_1 HF5&

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX""

<sup>&</sup>amp; "%%\ci gY\c`Xg'k YfY'Yl Wl XYX'Zfca 'a YUgi fY'Xi Y'hc W]Ybhg fYg]X]b[ ]b dfc YWh'Ygg'h\Ub" \*) 'XUng'''

# : M&\$&\$ Dfc[fUa '9j U'i Uhjcb'

7UhY[cfm DYfa UbYbhGi ddcfh]j Y < ci g]b[ 5[YbWh 7ca a i b]hm < ci g]b[ BYhk cf\_

 Dfc[fUa."
 Gci h\dc]bhD`UW

 DYf[cX.
 +#%#% ! %&# %#%

DYfZcfa UbW." < ][\"

## dUffbYfg\]d k ]h\ BUh]cbU`7\i fW\ FYg]XYbWgž7<B cZYfg`gUZYždYfa UbYbhgi ddcfhjj Y`\ci g]b[ hc (\* Zcfa Yf`m\ca YYgg`\ci gY\c`Xg`\ci gYX`]b &) ghi X]c UdUfha Ybhg`UbX`&%ZJa ]m hck b\ci gYg`]b h\Y`Gci h\g]XY`bY][\Vcf\ccX`cZ7c`i a Vi g"H\Y`Wta d`YI 'U`gc`cZYfg` Wta a i b]hm`]j ]b[ 'UbX`gYfj ]W 'gdUW'" #bX]j ]Xi U`UdUfha Ybhg`dfcj ]XY`hYbUbhg`k ]h\ ]bXYdYbXYbW\"&(!\ci f`ghUZ]b[ 'UbX`cbg]hY`gi ddcfh]j Y`gYfj ]Wg`f]bWi X]b[ ``]b\_U[ Yg`hc`WgY` a UbU[ Ya YbhUbX`Wti bgY`]b[ EUg`k Y```Ug`]bX]j ]Xi U`UbX`[ fci d`UWfj ]h]Yg`UfY`U``XYg][ bYX`hc` UXXfYgg`]bX]j ]Xi U`bYYXg`UbX`ghfYb[ h\Yb`h\Y`hYbUbhWta a i b]hm'iH\Y`[ cU`]g`hc`cZYf`\ci gY\c`Xg`h\Y`cddcfhi b]hmhc`XYj Y`cd`UbX`a U]bHJ]b`ghUV]`]hmk ]h\]b`h\Y`ZfUa Yk`cf\_cZU` gi ddcfh]j Y`Wta a i b]hm'i`

Dfc[fUa Ci h/k/a Y 5VK]Yj Ya Ybh+#%#% hc %&# %#% . DYfa UbYbhGi ddcfh]j Y < ci g]b[

A YUgi fY		GYa ]!Ubbi ປ΄ ; cປ΄	GYa]!UbbiU' 5V <b>h</b> iU'	5W(]Yj YX
<ci gy\c`xg'gyfj="" th="" yx'<=""><th></th><th>) %</th><th>) \$ .</th><th>M/g<sup>·</sup></th></ci>		) %	) \$ .	M/g <sup>·</sup>
9I ]hYX' <ci gy\c`xg%'<="" td=""><td></td><td>B#5<sup>-</sup></td><td>) .</td><td>B#5<sup>·</sup></td></ci>		B#5 <sup>-</sup>	) .	B#5 <sup>·</sup>
<ci 'ghv]`]hm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>) %</td><td>M/g<sup>·</sup></td></ci>	A cbh\g	&( ·	) %	M/g <sup>·</sup>
Hi fbcj Yf'F Uhy'''	1 .	%\$ <sup>·</sup>	%% <sup>.</sup>	B#5 <sup>·</sup>
Gi WWggZi `` <ci 'ci="" g]b[="" lwta="" td="" yg'<=""><td></td><td>( * ·</td><td>(, '</td><td>M/g<sup>·</sup></td></ci>		( * ·	(, '	M/g <sup>·</sup>
Gi WWggZi `` <ci 'ci="" g]b[="" lwta="" td="" yg'<=""><td>1 .</td><td>- \$`</td><td>- * '</td><td>M/g<sup>·</sup></td></ci>	1 .	- \$`	- * '	M/g <sup>·</sup>
Gi WWggZi `` <ci '9 ="" ]hg'<="" g]b[="" td=""><td>1 .</td><td>) \$<sup>·</sup></td><td>*\$'</td><td>M/g<sup>·</sup></td></ci>	1 .	) \$ <sup>·</sup>	*\$'	M/g <sup>·</sup>
<ci '5zzcfxuv]`]kmuh'9l="" ]k%'<="" g]b[="" td=""><td>1 .</td><td>) \$<sup>·</sup></td><td>%\$\$<sup>.</sup></td><td>B#5<sup>·</sup></td></ci>	1 .	) \$ <sup>·</sup>	%\$\$ <sup>.</sup>	B#5 <sup>·</sup>
91]hhc' <ca td="" y'yggbygg'<=""><td>1 .</td><td>O%\$ ·</td><td>\$<sup>-</sup></td><td>M/g<sup>·</sup></td></ca>	1 .	O%\$ ·	\$ <sup>-</sup>	M/g <sup>·</sup>
Dfc[fUa 'CWW dUbWhFUhY'	1 .	- ) ·	%\$\$ <sup>.</sup>	M/g <sup>·</sup>
DUgg Dfc[fUa 7Yfh]ZJVVInjcb		DUgg WfhjZwhcb	Bcb!7ca d`]Ubh	Bc <sup>·</sup>
BY[Uh]jYFYUgcb7Zcf@YUj]b[	1 .	&\$ ·	&\$ ·	M/g <sup>·</sup>
±bWfYUgY]bWlg\]bWtaYfth\Yf h\UbYad`cmaYbht2fcaYbhfmhc Yl]hcfYbXcZfYdcfh]b[dYf]cX&	1	<b>'</b> \$	*\$	<b>№</b> g <sup>-</sup>
	1	%) ·	&% <sup>-</sup>	<b>M</b> ∕g⁻

%"A cb]hcfYXžVi hbchYj U'i UhYX""

<sup>&</sup>amp; + \cigY\cXgkYfY`YIWiXYX`Zfca a YUgi fYXiY hcWjYbhgfYgjXjb[ ]bdfcYVMiYggih\Ub" \*) XUng"



7UHY [cfm DYfa UbYbhGi ddcfh] Y < ci g]b[ 5[YbWh 7ca a i b]hm < ci q]b[ BYhk cf\_

**Dfc[fUa**. K] gcb

DYf]cX. +#%#% ! %&#' %#%

DYfZcfa UbW. · · <][\

7ca a i b]hmkci g]b[ BYHkcf\_Ng'K] gcb dfc[fUa 'gYfj Yg'Y][ \hizcfa Yf'mi\ca Y'Ygg']bX]j ]Xi U'g' X]gUV'YX VmgYf]ci g'a YbHJ']`bYgg'H\Una Um'U'gc VY'W\fcb]WU`m\ca Y'Ygg'UbX'a Um'\Uj Y'Xi U'X]U[ bcg]g'cZa YbHJ']`bYgg'UbX'W\Ya ]WU`XYdYbXYbWh'GYfj ]WYg'UfY'dfcj ]XYX'Vma cV]`Y'WUgY' a UbU[Yfg'Zfca '7cbWtfX'7ci bgY`]b["'

# Dfc[fUa Ci hwca Y 5Wk]Yj Ya Ybh+#%#% hc %%# %#% . DYfa UbYbhGi ddcfhjj Y <ci gjb[

A YUgi fY		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!Ubbi Uʻ 5VMi Uʻ	5 <b>W.]</b> Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" td="" yx''<=""><td>c</td><td>- ·</td><td></td><td>M/g<sup>·</sup></td></ci>	c	- ·		M/g <sup>·</sup>
91 ]hYX' <ci gy\c`xg%'<="" td=""><td>c</td><td>B#5<sup>-</sup></td><td>\$</td><td>B#5<sup>-</sup></td></ci>	c	B#5 <sup>-</sup>	\$	B#5 <sup>-</sup>
<ci 'ghuv]`]lm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>-) ·</td><td>M/g<sup>·</sup></td></ci>	A cbh\g	&( ·	-) ·	M/g <sup>·</sup>
Hi fbcj Yf FUHY%	1 .	%\$ ·	\$.	B#5 <sup>-</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg''<=""><td>c</td><td></td><td></td><td>M/g<sup>·</sup></td></ci>	c			M/g <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>1 .</td><td>- \$ .</td><td>%\$\$<sup>.</sup></td><td>M/g<sup>·</sup></td></ci>	1 .	- \$ .	%\$\$ <sup>.</sup>	M/g <sup>·</sup>
Gi WWggZi`` <ci g] b['9 ] hg''<="" td=""><td>1 .</td><td>) \$ .</td><td>B#5<sup>-</sup></td><td>B#5<sup>-</sup></td></ci>	1 .	) \$ .	B#5 <sup>-</sup>	B#5 <sup>-</sup>
<ci 5zzcfxuv]]muh9l]h⁄²<="" g]b[="" td=""><td>1 .</td><td>) \$</td><td>B#5<sup>-</sup></td><td>B#5<sup>-</sup></td></ci>	1 .	) \$	B#5 <sup>-</sup>	B#5 <sup>-</sup>
91]hhc < ca Y YggbYgg	1 .	O%\$ ·	B#5 <sup>-</sup>	B#5 <sup>-</sup>
Dfc[fUa 'CWW dUbWhFUhY'	1 .	-) ·	%\$\$ <sup>.</sup>	M/g <sup>·</sup>
DUgg Dfc[fUa 7Yffj]ZJWJnjcb		DUgg:WfhjZjWJhjcb:	Bcb!7ca d`]Ubh	Bc <sup>·</sup>
BY[Uh]jY:FYUgcb:Zcf:@YUj]]b[' '	1 .	&\$ ·	B#5 <sup>-</sup>	B#5 <sup>-</sup>
±bWfYUgY]bWlg\]bWlfaYfth\Yf h\UbYad`cmaYbhLZfcaYbhfmhc Yl]hcfYbXcZfYdcfh]b[dYf]cX&	1	<b>'</b> \$	+%`	<b>№</b> g⁻
±bVfYUgY]b]bWcaYZfca Yad`cmaYbhžZfcaYbhfmhcYl]hcf YbXcZfYdcfh]b[dYf]cX&	1	%) .	\$.	Bc <sup>·</sup>

'Dfc^YVMX]X'bch\Uj Y'Ubm\ci gY\c`X'Yl ]hg/i bUV'Y'hc'VW'VV'UhY'a YUgi fY'''

7ca a i b]hm<ci g]b[ BYhk cf\_1 K ] gcb

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX""

<sup>%%\</sup>ci gY\c`X`k Ug`YI Wi XYX Zfca a YUgi fY`Xi Y`hc WjYbhfYgjXjb[ ]b dfc^YVhf`Ygg`h\Ub" \*) XUng"

## : M&\$&\$ Dfc[fUa '9| U'i Uh]cb

**7UHY[cfm** DYfa UbYbhGi ddcfh]j Y <ci g]b[ '

5[YbWm' A Ufm', Uj Yb'

 Dfc[fUa ."
 7ca a cbg Uh7\Ubfm

 DYf]cX.
 +#%#% ! %&# %#%

DYfZcfa UbW." < ][\"

7ca a cbg'Uh7\UblfmcdYbYX']b'5i [i gh&\$\$\* UbX']g'cdYfUhYX'h\fci [\ U'dUffbYfg\]d'
VYfk YYb A Ufm\Uj Yb'fgi ddcfh]j Y'gYfj ]Wgb'UbX'BUh]cbU'7\i fW\FYg]XYbWg'fXYj Y'cdYf'UbX'
dfcdYfma UbU[Yff''H\Y'dfcYWf\Ug'U'hchU'cZ%\$\$'UdUffa Ybhi b]hgzk ]h\ "\$ i b]hg']b'a i 'h]d'Y'
Vi ]'X]b[g'Zcf'`ck!]bWa Y'ZJa ]']Yg'UbX'(\$ i b]hg']b'U'g]b['Y'Vi ]'X]b['Zcf'W\fcb]WU'm\ca Y'Ygg'
a Yb'UbX'k ca Yb''': ]Zmmf) \$\footnooena b'ing'UfY'Zcf'X]gUV'YX']bX]j ]Xi U'g'UbX'ZJa ]']Yg'Yl dYf]YbW]b[
\ca Y'YggbYgg'f(\$ g]b['Y'UXi hgz'%\$'ZJa ]']Ygb'': Ua ]'mi b]hg']bWi XY'U'a ]i 'cZ&!'UbX''!
VYXfcca hckb\ci gYg''H\Y'Vi ]'X]b['Zcf'g]b['Y'a Yb'UbX'k ca Yb']g'U'Zci f!ghcfmz'(\$!i b]h
gffi Wf fY'k]h\ ga U''YZ]V]YbWflgmmY'UdUffa Ybhgz'Vba a cb gdUW'zcZ]W''gdUW'zUbX'ghcfU[Y''
: fcbhXYg\_fYWdh]cb'gYfj ]Wg'UfY'Uj U]'UV'Y'Ufci bX'h\Y'WcW\_hc \Y'd'a YYhfYg]XYbhbYYXg'
UbX'a cb]hcf'h\Y'ZJW]']hYg'UbX'[fci bXg'Zcf'gUZYhm'FYWdh]cb ghUZZ]g'`cVWhYX']b'h\Y'g]b['Y'
UXi 'hUdUffa YbhVi ]'X]b['UbX'Uj U]'UV'Y'hc'U'' fYg]XYbhg''Cbg]hY'ghUZZa Ya VYfg'dfcj ]XY'WlgY'
a UbU[Ya Ybhz'fYwbj Yfmgi ddcfhz'UbX']b\_U[Y'hc'Wa a i b]hmgYfj ]Wg'UbX'fYgci fWg''Ch\Yf'
gYfj ]Wg']bWi XY']bXYdYbXYbh'jj ]b['UbX'hfU]b]b['UbX'YXi Wlh]cbz'Ya d'cna Ybhgi ddcfhz'
fYg]XYbhWa a i b]hmXYj Y'cda Ybhz'UbX'fYwfYUh]cbU''Uflj ]h]Yg''''

Dfc[fUa Ci hwta Y 5vk]Yj Ya Ybh+#%#% hc %&# %#% . DYfa UbYbhGi ddcfhjj Y <ci g]b[

A YUgi fY		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!Ubbi Uʻ 5 <b>Vhi</b> Uʻ	5 <b>VN]</b> Yj YX
<ci gy\c`xg`gyfj="" th="" yx``<=""><th></th><th>)).</th><th>) %</th><th>M/g<sup>-</sup></th></ci>		)).	) %	M/g <sup>-</sup>
9l]hYX´ <ci gy\c`xg%´<="" td=""><td></td><td>B#5<sup>-</sup></td><td>( .</td><td>B#5<sup>-</sup></td></ci>		B#5 <sup>-</sup>	( .	B#5 <sup>-</sup>
<ci `ghjv]`]hm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>*\$"</td><td>M∕g<sup>-</sup></td></ci>	A cbh\g	&( ·	*\$"	M∕g <sup>-</sup>
H fbcj Yf FUhY%"	Ι.	%\$ ·		B#5 <sup>-</sup>
Gi WWYggZi `` <ci 'ci="" g]b[="" hwta="" td="" yg'<=""><td></td><td>) \$ .</td><td>) \$ .</td><td>M/g<sup>-</sup></td></ci>		) \$ .	) \$ .	M/g <sup>-</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>1 .</td><td>- \$<sup>·</sup></td><td>- , .</td><td>M/g<sup>-</sup></td></ci>	1 .	- \$ <sup>·</sup>	- , .	M/g <sup>-</sup>
Gi WWggZi`` <ci g]b['9 ]hg'<="" td=""><td>Ι.</td><td>) \$ .</td><td>+) .</td><td>M/g<sup>-</sup></td></ci>	Ι.	) \$ .	+) .	M/g <sup>-</sup>
<ci '5zzcfxuv]`]hmuh'9l="" ]h%<="" g]b[="" td=""><td>Ι.</td><td>) \$ .</td><td>* + .</td><td>B#5<sup>-</sup></td></ci>	Ι.	) \$ .	* + .	B#5 <sup>-</sup>
9l]hhc' <ca td="" y'yggbygg'<=""><td>Ι.</td><td>O%\$ ·</td><td>&amp;`</td><td>M/g<sup>-</sup></td></ca>	Ι.	O%\$ ·	&`	M/g <sup>-</sup>
Dfc[fUa CWWdUbWhFUhY	1 .	-) ·	- ( `	M/g <sup>-</sup>
DUgg Dfc[fUa 7Yft]ZJVVIt]cb		DUgg Wfh]Z]Wh]cb	Bcb!7ca d`]Ubh	Bc <sup>·</sup>
BY[UhjjYFYUgcbZcf@YUj]b[	Ι.	&\$ ·	\$.	M/g <sup>-</sup>
±bWfYUgY]bWdg\]bWdaYfch\Yf h\UbYad`cmaYbhŁZfcaYbhfmhcYl]h cfYbXcZfYdcfh]b[dYf]cX <sup>®</sup>	Ι.	'\$'	1.1.	M/g <sup>-</sup>
±bWfYUgY]b]bWtaYZfca Yad`cnaYbhzZfcaYbhfmhcYl]hcf YbXcZfYdcfh]b[dYf]cX&	1 .	%) .	%( ·	M/g <sup>-</sup>

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX""

<sup>&</sup>amp;- `\ciqY\c`Xg`k YfY`YI WiXYX`Zfca`a YUqifY`XiY hc`W]Ybhq`fYq]X]b[`]b`dfc^YVM`Yqq`f\Ub''\*)`XUnq'''



**7UhY cfm** DYfa UbYbhGi ddcfhli Y < ci qlb [

5[YbWm BUh]cbU 7\i fW FYg]XYbWg DYfa UbYbhGi ddcfh]j Y <ci g]b[

 Dfc[fUa.
 7ca a cbg Uh6i W]b[\Ua

 DYf[cX.
 +#%#% ! %## %#%

DYfZcfa UbW. · · <][\

BUHJCbU`7\i fW. FYgJXYbWg DYfa UbYbhGi ddcfhjj Y <ci gjb[ 'fBRRŁdfcj JXYg'+) 'dYfa UbYbh gi ddcfhjj Y \ci gjb[ 'i b]hg Zcf X]gUV`YX a Yb UbX k ca Yb Yl dYf]YbVJb[ '\ca Y`YggbYgg UbX &) i b]hg cZgi ddcfhjj Y \ci gjb[ 'Zcf ch\Yf ]bXjj ]Xi U`g Uhh\Y 7ca a cbg Uh6i W\_]b[ \Ua z\U'\\$\$!i b]h UdUfha YbhVi ]`X]b[ 'h\UhcdYbYX ]b \(\frac{1}{2}\) 'm&\$\%\"'7`]Ybhg Uhh\Y 7ca a cbg Uh6i W\_]b[ \Ua 'UfY' dfcj ]XYX gi ddcfhjj Y gYfj ]Wg VmBRR ghUZZUg k Y`` Ug j Uf]ci g ch\Yf dUfhbYf 'U[ YbVJYg''' GYfj ]Wg ]bWi XY WgY a UbU[ Ya Ybhz cV fYUX]bYgg UbX d`UWfa Ybhz VYbYZ]hg``]b\_U[ YzUbX `\]b\_U[ Y hc gi VghUbW 'UVi gY UbX a YbhU`\YU'h\ hfYUha Ybh'' 7`]Ybhg gYfj YX ]bWi XY h\cgY k ]h\ a YbhU`\YU'h\zgi VghUbW 'UVi gYzUbX#cfd\ng]WU`X]gUV]`]h]Yg'' <ci g]b[ 'gi Vg]X]Yg 'UfY' dfcj ]XYX h\fci [ \ U'dUfhYfq\]d k ]h\ h\Y'7c`i a Vi q'A Yhfcdc`]hUb <ci q]b[ '5i h\cf]hm''``

Dfc[fUa 'Ci h/kta Y'5VK]Yi Ya Ybh+#%#% 'hc'%&# %#%. DYfa UbYbhGi ddcfhli Y'<ci qlb['

A YUgi fY'		GYa ]!Ubbi ປ΄ ; cປ΄	GYa]!UbbiU` 5 <b>Vh</b> iU`	5 <b>W</b> (]Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" th="" yx''<=""><th></th><th>, &amp;<sup>.</sup></th><th>, \$.</th><th>M/g<sup>·</sup></th></ci>		, & <sup>.</sup>	, \$.	M/g <sup>·</sup>
9l]hYX' <cigy\c`xg%'< td=""><td></td><td>B#5<sup>-</sup></td><td>( .</td><td>B#5<sup>-</sup></td></cigy\c`xg%'<>		B#5 <sup>-</sup>	( .	B#5 <sup>-</sup>
<ci ]lm<="" g]b[="" ghjv]="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>), .</td><td>M∕g⁻</td></ci>	A cbh\g	&( ·	), .	M∕g⁻
H fbcj Yf'FUh/%''	1 .	%\$ <sup>·</sup>	) .	B#5 <sup>-</sup>
Gi WWyggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td></td><td>+( '</td><td>++.</td><td>M∕g⁻</td></ci>		+( '	++.	M∕g⁻
Gi WWYggZi`~ci g]b["Ci hWta Yg"	1 .	- \$ <sup>·</sup>	- + .	M∕g⁻
Gi WWggZi` <ci g]b['91]hg'<="" td=""><td>1 .</td><td>)\$'</td><td>1.1.1</td><td>Bc<sup>·</sup></td></ci>	1 .	)\$'	1.1.1	Bc <sup>·</sup>
<ci '5zzcfxuv]="" ]h%<="" ]hmuh9l="" g]b[="" td=""><td>1 .</td><td>)\$'</td><td>%\$\$<sup>·</sup></td><td>B#5<sup>-</sup></td></ci>	1 .	)\$'	%\$\$ <sup>·</sup>	B#5 <sup>-</sup>
9l]hhc' <ca td="" y'yggbygg'<=""><td>1 '</td><td>O%\$ ·</td><td>%</td><td>M∕g⁻</td></ca>	1 '	O%\$ ·	%	M∕g⁻
Dfc[fUa 'CWW/dUbWhFUhY'	1 .	-) ·	·	M∕g⁻
DUgg Dfc[fUa 7Yff]ZJVVInjcb		DUgg Wfh]Z]Wh]cb	7ca d`]Ubh	M∕g⁻
BY[Uh]jYFYUgcbZcf@YUj]b[''	1 .	&\$ ·	\$.	M∕g⁻
±oWfYUgY]bWlg\]bWlaYfth\UbYad`cnaYbHz7caYbHfnhcYl]hcf YbXcZfYdcfh]b[dYf]cX <sup>82</sup>	1	<b>'</b> \$'	+\$`	M <b>r</b> g <sup>·</sup>
±bWfYUgY`]b`]bWtaY`Zfca Yad`cnaYbhžZfca Ybhfmhc'Yl]hcf YbX`cZfYdcfh]b[`dYf]cX' <sup>&amp;z</sup>	1	% .	1 .	Bc <sup>-</sup>

ˈ%XYWYÜgYX:\cigY\c`X:k:Ug:YIWIXYX:Zfca a YUgifY"

BRR i 7ca a cbg Uh6i W]b[\Ua

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYi U'i UhYX""

<sup>&</sup>amp; %& \cigY\c`Xg`k YfY`Yl Wi XYX`Zfca a YUgi fY`Xi Y`hc WjYbhg`fYg]X]b[ ]b`dfc^YWh`Ygg`h\Ub " \*) XUng"

## : M&\$&\$ Dfc[fUa '9j U'i Uh]cb

**7UhY[cfm** DYfa UbYbhGi ddcfh]j Y < ci g]b[

5[YbWm Buhjcbu 7\i fW Fyg]XYbWg Dyfa UbybhGi ddcfhj y <ci gjb[

 Dfc[fUa."
 7ca a cbg'Uh; fUbh

 DYf[cX."
 +#%#% ! %&# %#%

DYfZcfa UbW. · · <][\

BUhjcbu 7\i fW. FYg]XYbWrg DYfa UbYbhGi ddcfhji Y <ci g]b[ fBRRŁdfcj ]XYg) \$ dYfa UbYbh gi ddcfhji Y \ci g]b[ i b]hg Zcf X]gUV YX a Yb UbX k ca Yb Yl dYf]YbWjb[ \ca Y YggbYgg UbX) \$ i b]hg cZgi ddcfhji Y \ci g]b[ Zcf ch\Yf ]bXjj ]Xi U'g Uhh\Y 7ca a cbg Uh; fUbhëU %\$\$!i b]h UdUfha YbhVi ] X]b[ h\UhcdYbYX]b &\$\$' "7 ]Ybhg Uhh\Y 7ca a cbg Uh; fUbhUfY dfcj ]XYX gi ddcfhji Y gYfj ]Wrg VmBRR ghUZZUg k Y`` Ug j Uf]ci g ch\Yf dUfhbYf U[ YbWjYg" GYfj ]Wrg ]bWi XY WugY a UbU[ Ya Ybhë cv fYUX]bYgg UbX d`UWa Ybhë VYbYZ]hg``]b\_U[ YžUbX ``]b\_U[ Y hc gi VghUbW Uvi gY UbX a YbhU `\YU h\ hfYUha Ybh' Cbg]hY ZJWj]hjYg ]bWi XY U fYgci fW WbhYf k ]h\ Wta di hYfg UbX a UhYf]U g Zcf fYg]XYbhgž U WUggfcca ž UbX a i `hjd Y a YYhjb[ fcca g Zcf Vch\ fYg]XYbhg UbX ghUZ" 7 ]Ybhg gYfj YX ]bWi XY h\cgY k ]h\ a YbhU \YU'h\ žgi VghUbW Uvi gYž UbX#cf'd\ng]VW X]gUV] hjYg" <ci g]b[ gi Vg]X]Yg UfY dfcj ]XYX h\fci [ \ U'dUfhbYfg\]d k ]h\ h\ Y

## Dfc[fUa Ci hVta Y 5VN]Yj Ya Ybh+#%#% hc %&# %#% . DYfa UbYbhGi ddcfhjj Y < ci g]b[

A YUgi fY		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!UbbiU 5 <b>Vhi</b> U	5 <b>W</b> (]Yj YX
<ci gy\c`xg`gyfj="" th="" yx``<=""><th></th><th>)).</th><th>) %</th><th>M∕g<sup>·</sup></th></ci>		)).	) %	M∕g <sup>·</sup>
9l]hYX' <cigy\c`xg%'< td=""><td></td><td>B#5<sup>-</sup></td><td>%<sup>-</sup></td><td>B#5<sup>-</sup></td></cigy\c`xg%'<>		B#5 <sup>-</sup>	% <sup>-</sup>	B#5 <sup>-</sup>
<ci 'ghuv]`]hm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>- \$`</td><td>Ŋ<b>r</b>g⁻</td></ci>	A cbh\g	&( ·	- \$`	Ŋ <b>r</b> g⁻
Hi fbcj Yf'F Uhy''	1	%\$ <sup>·</sup>	& <sup>.</sup>	B#5 <sup>-</sup>
Gi WWggZi `` <ci 'ci="" g]b[="" lwta="" td="" yg''<=""><td></td><td>) \$ .</td><td>) \$ .</td><td>M∕g<sup>·</sup></td></ci>		) \$ .	) \$ .	M∕g <sup>·</sup>
Gi WWggZi `` <ci 'ci="" g]b[="" hwta="" td="" yg<=""><td>1 '</td><td>- \$<sup>·</sup></td><td>%\$\$<sup>-</sup></td><td>M∕g<sup>·</sup></td></ci>	1 '	- \$ <sup>·</sup>	%\$\$ <sup>-</sup>	M∕g <sup>·</sup>
Gi W M gg Zi ``< ci g]b[ '9  ]hg '	1 '	) \$ <sup>·</sup>	B#5 <sup>-</sup>	B#5 <sup>-</sup>
<ci '5zzcfxuv]`]kmuh9l="" ]k%<="" g]b[="" td=""><td>1</td><td>) \$<sup>·</sup></td><td>B#5<sup>-</sup></td><td>B#5<sup>-</sup></td></ci>	1	) \$ <sup>·</sup>	B#5 <sup>-</sup>	B#5 <sup>-</sup>
91]hhc <a td="" y`yggbygg<=""><td>1</td><td>O%\$ ·</td><td>\$<sup>.</sup></td><td>M∕g<sup>·</sup></td></a>	1	O%\$ ·	\$ <sup>.</sup>	M∕g <sup>·</sup>
Dfc[fUa 'CWW dUbWhFUhY'	1 '	- ) ·	%\$\$ <sup>-</sup>	M∕g <sup>·</sup>
DUgg:Dfc[fUa:7Yfh]Z]VVh]cb:		DUgg Wfh]Z]Wh]cb	7ca d`]Ubh	M∕g <sup>·</sup>
BY[Uh]jYFYUgcb7Zcf@YUj7]b['	1 '	&\$ ·	B#5 <sup>-</sup>	B#5 <sup>·</sup>
±0√07/UgY]b WUg\]bWta Y ftth\Yf h\Ub Ya d`cna YbHz7ca YbHfmhc Yl]hcfYbX cZfYdcfn]b[ dYf]cX82	1 .	<b>'</b> \$'	)	<b>M</b> ∕g⁻
±bWfYUgY]b]bWtaYZfca Yad`cnaYbhïZfcaYblfmhcYl]hcf YbXcZfYdcfh]b[dYf]cX8Z	1 '	% .		Bc <sup>*</sup>

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX""

'%XYWYUgYX\cigY\c`XkUgYIWIXYXZfca a YUgifY"

\_

<sup>&</sup>amp;( \cigY\c`Xg`k YfY`YI WI XYX`Zfca a YUgi fY`Xi Y`hc`W]Ybhg`fYg]X]b[ ]b`dfc^YWf`Ygg`h\Ub" \*) `XUng"



**7UHY [ cfm** DY fa UbYbhGi ddcfh]j Y < ci g]b[

5[YbWm: BUh]cbU:7\if twx Fyg]xybwng Giddcfhjj y'<cig]b['

 Dfc[fUa.
 7ca a cbg Uh@j ]b[ghcb

 DYf]cX.
 +#%#% ! %&# %#%

DYfZcfa UbW. · · <][\

BUłjcbu 7\i fW. FYgjXYbWg DYfa UbYbhGi ddcfłij Y <ci g]b[ fBRRŁdfcj ]XYg \* \$ dYfa UbYbh gi ddcfłij Y \ci g]b[ i b]łg Zcf X]gUV YX a Yb UbX k ca Yb k \c UfY U gc j YhYfUbg UbX Yl dYf]YbWJb[ \ca Y YggbYgg UbX (\$ i b]łg cZgi ddcfłij Y \ci g]b[ Zcf ch\Yf j YhYfUbg Uhih\Y 7 ca a cbg Uh@j ]b[ glcb UfY dfcj ]XYX gi ddcfłij Y gyfj ]Wg Vmh\Y J YhYfUbg 5ZZJ]fg UbX BRR gluZZUg k Y Ug j Uf]ci g ch\Yf dUflbYf U[ YbVJYg" GYfj ]Wg JbWi XY WJgY a UbU[ Ya Ybłź cV fYUX]bYgg UbX d UWYa Ybhž VYbYZ]łg ]b\_U[ Y z UbX Ybłu y Uvi gY UbX a Ybłu \YU h\ ffYUha Ybh 7]Ybhg gYfj YX ]bWi XY h\cgY k ]h\ a Ybłu \YU h\ zgi VgłUbW Uvi gY zUbX#cf d\ng]\W X]gUV] JłjYg <ci g]b[ gi Vg]X]Yg UfY dfcj ]XYX h\fci [\UdUflbYfg\]d k ]h\ h\ Y 7c`i a Vi g`A Ylfcdc`]łub <ci g]b[ 5i h\cf]lm"

Dfc[fUa Ci h/k/a Y 5V/k]/yj Ya Ybh+#%#% hc %&# %#% . DYfa UbYbhGi ddcfhjj Y <ci g]b[

A YUgi fY		GYa ]lUbbi Ư˙ ; cƯ˙	GYa]!Ubbi ປ΄ 5 <b>VM</b> ປ΄	5 <b>W</b> (]Yj YX
<ci gy\c`xg`gyfj="" th="" yx``<=""><th></th><th>* * '</th><th>* - '</th><th>M/g<sup>-</sup></th></ci>		* * '	* - '	M/g <sup>-</sup>
91 ]hYX' <ci gy\c`xg%'<="" td=""><td></td><td>B#5<sup>·</sup></td><td>1 - 1</td><td>B#5<sup>-</sup></td></ci>		B#5 <sup>·</sup>	1 - 1	B#5 <sup>-</sup>
<ci 'ghuv]`]hm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>()</td><td>M/g<sup>-</sup></td></ci>	A cbh\g	&( ·	()	M/g <sup>-</sup>
H fbcj Yf'FUhY%'	1 '	%\$ <sup>.</sup>	) .	B#5 <sup>-</sup>
Gi WWYggZl`~ <ci g]b['ci="" hvta="" td="" yg'<=""><td></td><td>) - '</td><td>* .</td><td>M/g<sup>-</sup></td></ci>		) - '	* .	M/g <sup>-</sup>
Gi WWYggZl`~ <ci g]b["ci="" hvta="" td="" yg("<=""><td>1 '</td><td>- \$ ·</td><td>%\$\$<sup>-</sup></td><td>M/g<sup>-</sup></td></ci>	1 '	- \$ ·	%\$\$ <sup>-</sup>	M/g <sup>-</sup>
Gi WWggZi`` <ci g]b['9 ]hg('<="" td=""><td>1 '</td><td>) \$ .</td><td>%\$\$<sup>-</sup></td><td>M/g<sup>-</sup></td></ci>	1 '	) \$ .	%\$\$ <sup>-</sup>	M/g <sup>-</sup>
<ci '5zzcfxuv]`]hm'uh'91="" ]h%'<="" g]b[="" td=""><td>1 '</td><td>) \$ .</td><td>%\$\$<sup>-</sup></td><td>B#5<sup>-</sup></td></ci>	1 '	) \$ .	%\$\$ <sup>-</sup>	B#5 <sup>-</sup>
91]hhc' <ca td="" y`yggbygg'<=""><td>1 '</td><td>O%\$ ·</td><td>\$.</td><td>M/g<sup>-</sup></td></ca>	1 '	O%\$ ·	\$.	M/g <sup>-</sup>
Dfc[fUa 'CWWdUbWhFUhY' '	1 '	-) ·	<b>%\$)</b> .	M/g <sup>-</sup>
DUgg Dfc[fUa '7Yfh]Z[VVIn]cb'		DUgg WfhjZjWhjcb	7ca d`]Ubhi	M/g <sup>-</sup>
BY[Uh]jYFYUgcb7Zcf@YUj]b[('	1 '	&\$ ·	\$.	M/g <sup>-</sup>
±bWfYUgY]bWg\]bWdaYfthYf h\UbYad`cmaYbHzTcaYbHfmhc Yl]ncfYbXcZfYdcHn]b[dYf]cX∞	1	' \$ <sup>·</sup>	*\$	M/g <sup>-</sup>
±bWfYUgY]b]bWtaYZfca Yad`cnaYbhïZfcaYbhfmhcYl]hcf YbX`cZfYdcfh]b[dYf]cX <sup>&amp;</sup> Z	1 '	%) .	%	M/g <sup>-</sup>

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX""

<sup>&</sup>amp;% '\ci gY\c`Xg`k YfY YI WI XYX`Zfca 'a YUgi fY`Xi Y`hc`W]Ybhg`fYg]X]b[`]b`dfcYVM`Ygg`h\Ub'' \*) 'XUng''

<sup>:</sup> i bX]b[ U`ck g Zcf cj Yf YUg]b["

<sup>(&</sup>quot;%XYWYUgYX \ci gY\c`X k Ug YI WI XYX Zfca a YUgi fY"

# : M&\$&\$ Dfc[fUa '9j U'i Uhjcb'

7UhY[cfm DYfa UbYbhGi ddcfhjj Y <ci g]b[

5[YbWn Buh]cbu 7\i fwk Fyg]Xybwrg Dyfa UbybhGi ddcfhjj y <ci g]b[ '

 Dfc[fUa.
 7ca a cbg UhH\]fX

 DYf]cX.
 +#%#% ! %&# %#%

DYfZcfa UbW. · · <][\

BUhjcbU 7\i fW FYg]XYbWg DYfa UbYbhGi ddcfhji Y <ci g]b[ 'fBRRŁdfcj ]XYg \* \$ dYfa UbYbh gi ddcfhji Y \ci g]b[ 'i b]hg Zcf X]gUV YX a Yb UbX k ca Yb Yl dYf]YbVJb[ '\ca Y YggbYgg UbX (\$ i b]hg cZgi ddcfhji Y \ci g]b[ 'Zcf ch\Yf ]bX]j ]Xi U'g Uhh\Y 7ca a cbg UhH\]fXžU %\$\$!i b]h UdUfha YbhVi ]X]b[ 'h\UhcdYbYX ]b >i bY &\$\%\"7`]Ybhg Uhh\Y 7ca a cbg UhH\]fX`UfY dfcj ]XYX gi ddcfhji Y gYfj ]Wg VmBRR grUZZUbX; ccXk] `7c`i a Vi gžUg k Y `Ug j Uf]ci g ch\Yf dUffbYf U[ YbVJYg"GYfj ]Wg ]bWi XY WgY a UbU[ Ya Ybhž cV fYUX]bYgg UbX d`UWa Ybhž VYbYZ]hg `]b\_U[ YžUbX `]b\_U[ Y hc gi VghUbW UVi gY UbX a YbhU \YUh\ hfYUha Ybh' 7`]Ybhg gYfj YX ]bWi XY h\cgY k ]h\ a YbhU \YUh\ žgi VghUbW UVi gYžUbX#cf d\ng]WU X]gUV] ]h]Yg" <ci g]b[ gi Vg]X]Yg UfY dfcj ]XYX h\fci [\UdUffbYfg\]d k ]h\ h\Y7c`i a Vi g A Yhfcdc`]hUb <ci g]b[ 5i h\cf|m"

Dfc[fUa Ci h/ka Y 5Vk]Yj Ya Ybh+#%#% hc %&# %#% . DYfa UbYbhGi ddcfh]j Y < ci g]b[

A YUgi fY		GYa ]!Ubbi ປ΄ ; cປົ	GYa]!UbbiU^ 5VMU'	5 <b>W</b> (]Yj YX
<ci gy\c`xg'gyfj="" td="" yx''<=""><td></td><td>* * '</td><td>* + .</td><td>M/g<sup>·</sup></td></ci>		* * '	* + .	M/g <sup>·</sup>
9l]hYX' <cigy\c`xg%'< td=""><td></td><td>B#5<sup>-</sup></td><td>) .</td><td>B#5<sup>-</sup></td></cigy\c`xg%'<>		B#5 <sup>-</sup>	) .	B#5 <sup>-</sup>
<ci 'ghuv]`]hm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>( * ·</td><td>M/g<sup>·</sup></td></ci>	A cbh\g	&( ·	( * ·	M/g <sup>·</sup>
Hi fbcj Yf'F UhY%'	1 .	%\$ <sup>.</sup>		B#5 <sup>-</sup>
Gi WWyggZi `` <ci 'ci="" g]b[="" hwta="" td="" yg'<=""><td></td><td>) - '</td><td>*) .</td><td>M/g<sup>·</sup></td></ci>		) - '	*) .	M/g <sup>·</sup>
Gi WWyggZi `` <ci '<="" 'ci="" g]b[="" hwta="" td="" yg)=""><td>1 .</td><td>- \$<sup>·</sup></td><td>%\$\$<sup>-</sup></td><td>M/g<sup>·</sup></td></ci>	1 .	- \$ <sup>·</sup>	%\$\$ <sup>-</sup>	M/g <sup>·</sup>
Gi W M gg Zi ``< ci g]b[ '9  ]hg) '	1 '	) \$ .	%\$\$ <sup>-</sup>	M/g <sup>·</sup>
<ci '5zzcfxuv]`]hmuh'9l="" '<="" ]hv²="" g]b[="" td=""><td>1 .</td><td>) \$ .</td><td>%\$\$<sup>.</sup></td><td>B#5<sup>-</sup></td></ci>	1 .	) \$ .	%\$\$ <sup>.</sup>	B#5 <sup>-</sup>
91]hhc' <ca td="" y'yggbygg'<=""><td>1 .</td><td>O%\$ ·</td><td>%</td><td>M/g<sup>·</sup></td></ca>	1 .	O%\$ ·	%	M/g <sup>·</sup>
Dfc[fUa 'CWWdUbWhFUhY('	1 .	-) ·	%\$) ·	M/g <sup>·</sup>
DUgg Dfc[fUa '7Yfh]Z]\Wh]cb'		DUgg Wfh]Z]Wh]cb	7ca d`]Ubh	M/g <sup>·</sup>
BY[Uh]jYFYUgcb7Zcf@YUj]b[)	1 .	&\$ ·	\$.	M/g <sup>·</sup>
±0.WfYUgY ]b WUg\ ]bWda Y ftth\Yf h\Ub Ya d`cma YbHz7ca YbHfmhc Yl ]hcfYbX cZfYdcfh]b[ dYf]cX∞	Ι .	'\$'	) +	<b>№</b> g <sup>-</sup>
±bWfYUgY]b]bWtaYZfca Yad`cmaYbhzZfcaYbhfmhcYl]hcf YbXcZfYdcfh]b[dYf]cX∞	Ι.	%) ·	%%	<b>№</b> g <sup>-</sup>

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX""

<sup>&</sup>amp;- \ci gY\c`Xg`k YfY`YI WI XYX`Zfca 'a YUgi fY`Xi Y`hc`W]Ybhg`fYg]X]b[ ']b`dfc^YVlh`Ygg`H\Ub'' \*) 'XUng''

<sup>`&</sup>amp;`\ci gY\c`Xg`k]h\``\$']bWta Y'UbX``\$'a`cbh\`mfYbhUbX'i hj`]hjYg'k YfY'Yl Wl XYX'Zfca 'WU'W'Uhjcb'''

<sup>(:</sup> i bX]b[ 'U``ck g'Zcf'cj Yf``YUg]b[ "'

<sup>) &</sup>amp; XYWUgYX \ci gY\c`Xg k YfY YI WI XYX Zfca a YUgi fY"



**7UhY[cfm** DYfa UbYbhGi ddcfh]j Y < ci g]b[

5[YbWm JYhYfUb 5ZZJ]fg

**Dfc[fUa**." J5G<%"

DYf]cX. +#\/#\% ! \%\#' \/#\%

DYfZcfa UbW... B#5.

H\Y'7c`i a Vi g'VfUbV\cZh\Y'8YdUffa YbhcZJYhYfUbg'5ZZU]fg'cdYfUhYg'' \* ( 'i b]hg'cZ gi ddcfh]j Y'\ci g]b[ 'Zcf'j YhYfUbg''' H\Y'J5'dfcj ]XYg'WgY'a UbU[ Ya Ybhžd\ng]\W''UbX'a YbhU'' \YU'h\ gYfj ]\W'gz'UbX'\ci g]b[ 'gi Vg]X]Yg''' H\Y'J5'Gi ddcfh]j Y'<ci g]b[ 'fJ'5G<Łdfc[ fUa' dUfh]\V]dUhYg']b '7GDžVi h]g'bchZ bXYX'Vm7G6''' H\Y'dfc[ fUa 'Wta d'YhYX'XUh'J'YbhfmYUf'm]b'' : \M&\$&\$ 'UbX']g']bWi XYX']b'h\Y'Dfc[ fUa '9j U'i Uh]cb 'Zcf'h\Y'Z[fghh]a Y'''

# Dfc[fUa 'Ci hWta Y'5Wk]Yj Ya Ybh+#%#% 'hc'%&# %#% . 'DYfa UbYbh'Gi ddcfhjj Y'<ci g]b['

A YUgi fY		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!Ubbi ປ΄ 5 <b>Vhi</b> ປ΄	5 <b>V\</b> ]Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" th="" yx''<=""><th></th><th>B#5<sup>·</sup></th><th>', %</th><th>B#5<sup>·</sup></th></ci>		B#5 <sup>·</sup>	', %	B#5 <sup>·</sup>
9I ]hYX' <ci gy\c`xg&'<="" td=""><td></td><td>B#5<sup>·</sup></td><td>&amp;\$ ·</td><td>B#5<sup>·</sup></td></ci>		B#5 <sup>·</sup>	&\$ ·	B#5 <sup>·</sup>
<ci 'ghjv]`]hm<="" g]b[="" td=""><td>A cbh\g</td><td>B#5<sup>·</sup></td><td>(, .</td><td>B#5<sup>·</sup></td></ci>	A cbh\g	B#5 <sup>·</sup>	(, .	B#5 <sup>·</sup>
H fbcj Yf FUhY&	1 .	B#5 <sup>-</sup>	) .	B#5 <sup>·</sup>
Gi WWggZi`' <ci g]b['ci="" td="" wka="" yg'<=""><td></td><td>B#5<sup>-</sup></td><td>' *) '</td><td>B#5<sup>-</sup></td></ci>		B#5 <sup>-</sup>	' *) '	B#5 <sup>-</sup>
Gi WWggZi`' <ci g]b['ci="" td="" wka="" yg('<=""><td>1 .</td><td>B#5<sup>·</sup></td><td>- * ·</td><td>B#5<sup>-</sup></td></ci>	1 .	B#5 <sup>·</sup>	- * ·	B#5 <sup>-</sup>
Gi WWYggZi`' <ci g]b['9 ]hg('<="" td=""><td>1 .</td><td>B#5<sup>-</sup></td><td>&amp;&amp;<sup>.</sup></td><td>B#5<sup>-</sup></td></ci>	1 .	B#5 <sup>-</sup>	&& <sup>.</sup>	B#5 <sup>-</sup>
91]hhc' <ca td="" y'yggbygg'<=""><td>1 .</td><td>B#5<sup>-</sup></td><td>%</td><td>B#5<sup>-</sup></td></ca>	1 .	B#5 <sup>-</sup>	%	B#5 <sup>-</sup>
Dfc[fUa 'CWWdUbWhFUhY'	1 .	B#5 <sup>-</sup>	-, '	B#5 <sup>-</sup>
DUgg Dfc[fUa '7Yfh]Z]Wlh]cb'		DUgg Wft]Z]Wh]cb	7ca d`]Ubhk ]h\ 7cbX]h]cbg	M/g <sup>·</sup>
BY[Un]jY:FYUgcb:Zcf:@YUj]b[(:	1 .	B#5 <sup>-</sup>	\$ <sup>.</sup>	B#5 <sup>·</sup>
±0VfYUgY ]b WUg\ ]bVt/a Y ftch\Yf h\Ub Ya d`cma YbhŁZfca Ybhfmhc Yl]hcfYbX cZfYdcfh]b[ dYf]cX ¾	1	B#5 <sup>-</sup>	- '	B#5 <sup>·</sup>
±oWfYUgY]b]bWtaYZfca Yad`cmaYbhžZfcaYbhfmhcYl]hcf YbXcZfYdcfh]b[dYf]cX <sup>™</sup>	I '	B#5 <sup>-</sup>	1 1	B#5 <sup>·</sup>

& A cb]hcfYXžVi hbchYj U`i UhYX"

( & XYWYUgYX \ci gY\c Xg k YfY Yl Wl XYX Zfca a YUgi fY"

JYHYfUbgÑ5ZZU]fg`l`J5G<

, )

<sup>%</sup> Dfc[fUa bchZ bXYX Vm7G6"

<sup>&#</sup>x27;) & \cigY\c Xg k YfY Yl Wl XYX Zfca a YUgi fY Xi Y hc W]Ybhg fYg]X]b[]b dfc YWh Ygg h\Ub "\*) XUng"

# : M&\$&\$ Dfc[fUa '9] U'i Uhcb'

**7UHY[cfm** DYfa UbYbhGi ddcfh]j Y <ci g]b[

5[YbWn JcibhYfgcZ5aYf]WJC\]c/ \frac{1}{2}X]UbU

Dfc[fUa.": Ua]mGi ddcfh]j Y < ci g]b[

DYf]cX. +#%#% ! %&# %#%

DYfZcfa UbW." < ][\"

Jci bhYYfgcZ5a Yf]WNigdYfa UbYbhgi ddcfhij Y'\ci gjb['dfc[fUa 'gYfj Yg'\ca Y'Ygg'UbX' X]gUV'YX'ZUa]']Yg'k]h\'W\]XfYb'UbX'hfUbg]hjcb!U[Y'nai h\"'H\Y'dfc[fUa 'dfcj]XYg", 'gWUhYfYX! gjhY'UdUfha Ybhg'UbX'[cU'!cf]YbhYX'WgY'a UbU[Ya YbhgYfj]WYg"'

# Dfc[fUa 'Ci hWta Y'5Wk]Yj Ya Ybh+#%#% 'hc'%&#' %#%. 'DYfa UbYbhGi ddcfhjj Y'<ci gjb['

A YUgi fY		GYa ]!Ubbi ປ΄ ; cປ΄	GYa]!Ubbi ປ΄ 5 <b>Vh</b> i ປ΄	5 <b>\%</b> ]Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" th="" yx''<=""><th></th><th>( &amp; ·</th><th>( %</th><th>M∕g<sup>·</sup></th></ci>		( & ·	( %	M∕g <sup>·</sup>
9I]h/X' <ci gy\c`xg%'<="" td=""><td></td><td>B#5<sup>-</sup></td><td>+ .</td><td>B#5<sup>-</sup></td></ci>		B#5 <sup>-</sup>	+ .	B#5 <sup>-</sup>
<ci 'ghuv]="" ]hm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>( * ·</td><td>M/g<sup>-</sup></td></ci>	A cbh\g	&( ·	( * ·	M/g <sup>-</sup>
H fbcj Yf FUNY®	1 '	%\$ <sup>.</sup>	% .	B#5 <sup>·</sup>
Gi WWggZi`~ci g]b['Ci HVta Yg'		1	(\$	M∕g <sup>·</sup>
Gi WWYggZi`` <ci g]b['ci="" hvta="" td="" yg''<=""><td>1 .</td><td>- \$<sup>·</sup></td><td>%\$\$<sup>-</sup></td><td>M∕g<sup>·</sup></td></ci>	1 .	- \$ <sup>·</sup>	%\$\$ <sup>-</sup>	M∕g <sup>·</sup>
Gi WWggZi`` <ci '9 ="" ]hg'<="" g]b[="" td=""><td>1 .</td><td>) \$ .</td><td>%\$\$<sup>-</sup></td><td>M/g<sup>-</sup></td></ci>	1 .	) \$ .	%\$\$ <sup>-</sup>	M/g <sup>-</sup>
<ci '5zzcfxuv]`]hmun'9l="" ]h%'<="" g]b[="" td=""><td>1 .</td><td>) \$ .</td><td>1 · ·</td><td>B#5<sup>-</sup></td></ci>	1 .	) \$ .	1 · ·	B#5 <sup>-</sup>
91]hhc' <ca td="" y'yggbygg'<=""><td>1 .</td><td>O%\$ ·</td><td>) .</td><td>M/g<sup>-</sup></td></ca>	1 .	O%\$ ·	) .	M/g <sup>-</sup>
Dfc[fUa 'CWWdUbWhFUhY'	1 .	-) ·	, - '	Bc <sup>·</sup>
DUgg Dfc[fUa '7Yft]ZJWJt]cb'		DUgg Wfh]Z]Wh]cb	7ca d`]Ubhk ]h\ 7cbX]h]cbg	M/g <sup>·</sup>
BY[Un]jYFYUgcb7Zcf@YUj]b[**	1 .	&\$ ·	\$ <sup>.</sup>	M∕g <sup>·</sup>
±0VfYUgY]b WUg\]bWda Y ftch\Yf h\Ub Ya d`cna YbHz7fca YbHfmhc Yl]hcfYbX cZfYdcfh]b[ dYf]cX82	1	<b>'</b> \$`	' &·	<b>№</b> g <sup>-</sup>
±oWfYUgY]b]bWcaYZfca Yad`cmaYbbïZfcaYbbfmhcYl]hcf YbXcZfYdcfh]b[dYf]cX82	1 .	%) .	r _ ·	N <b>Y</b> g⁻

"%XYVN\*UgYX'\cigY\c`X'kUg'YIWIXYX'Zfca 'a YUgifY"

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX""

<sup>&</sup>amp;- \ci gY\c`Xg'k YfY'YI WI XYX Zfca a YUgi fY'Xi Y hc W]Ybhg'fYg]X]b[ ]b dfc^YVMYYgg'h\Ub" \*) XUng"



**7UhY[cfm** DYfa UbYbhGi ddcfhjj Y <ci g]b[

5[YbWhi JcibhYYfgcZ5aYf]WU'C\]c/ \bX]UbU

 Dfc[fUa .
 J Ub 6i fYb J]``U[Y

 DYf]cX.
 +#%#% ! %&# %#%

DYfZcfa UbW. · <][\

JUb 6i fYb J]``U[Y]g`U'%\$\$!i b]hdYfa UbYbhgi ddcfhjj Y`\ci g]b[ 'UdUfha Ybh'Vi ]`X]b[ 'h\Uh cdYbYX]b`>Ubi Ufm&\$%\* "'Jc`i bhYYfg`cZ5a Yf]WU'dfcj ]XYg`\*\$ dYfa UbYbhgi ddcfhjj Y`\ci g]b[ 'i b]hg`Zcf`X]gUV`YX`a Yb`UbX`k ca Yb`Yl dYf]YbV]kb[ \ca Y`YggbYgg`UbX`(\$`i b]hg`cZgi ddcfhjj Y`\ci g]b[ 'Zcf`585A < W]Ybhg"'

FYg]XYbhg`UhJ Ub 6i fYb'J]``U[Y'UfY'dfcj]XYX'k]h\ gi ddcfh]j Y'gYfj]Wg`]bWi X]b['WgY' a UbU[Ya Ybhz`cV'fYUX]bYgg`UbX'd`UWfa Ybhz`UbX``]b\_U[Y'k]h\ 'VYbYZ]hg`UbX'gi VghUbWf' UVi gY#a YbhU`\YU'h\ hfYUha Ybh''H\Y'gYfj]W'dfcj]XYf'Zcf'h\]g'dfc'YWf]g'BUh]cbU`'7\i fW\ FYg]XYbWfg'UbX'h\Y'dfcdYfhm]g'a UbU[YX'Vm7ca a i b]hmDfcdYfh]Yg'cZC\]c"'\p\X]j ]Xi U'g' gYfj YX']bWi XY'h\cgY'k]h\ a YbhU`\YU'h\zgi VghUbWf'UVi gYz'UbX#cf'd\ng]Wi`X]gUV]`]h]Yg'' <ci g]b['gi Vg]X]Yg'UfY'dfcj]XYX'h\fci [\'U'dUffbYfg\]d'k]h\ h\Y'7c`i a Vi g'A Yhfcdc`]hUb' <ci g]b['5i h\cf]hm''''

Dfc[fUa Ci h/nta Y 5VN]Yj Ya Ybh+#%#% hc %&# %#%. DYfa UbYbhGi ddcfh]j Y < ci q]b[

A YUgi fY		GYa ]!Ubbi ປົ΄ ; cປົ΄	GYa]!UbbiU^ 5 <b>Vh</b> iU^	5 <b>V\()</b> Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" th="" yx''<=""><th>٠</th><th>**'</th><th>*( '</th><th>M∕g<sup>·</sup></th></ci>	٠	**'	*( '	M∕g <sup>·</sup>
9I]hYX' <ci gy\c`xg%'<="" td=""><td>٠,</td><td>B#5<sup>-</sup></td><td>( .</td><td>B#5<sup>-</sup></td></ci>	٠,	B#5 <sup>-</sup>	( .	B#5 <sup>-</sup>
<ci g]b[="" ghjv]`]hm<="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>' ( '</td><td>M∕g<sup>·</sup></td></ci>	A cbh\g	&( ·	' ( '	M∕g <sup>·</sup>
H fbcj Yf'FUhY%'	Ι,	%\$ ·	+.	B#5 <sup>-</sup>
Gi WWggZi`~ <ci 'ci="" g]b[="" lwta="" td="" yg'<=""><td></td><td>) - '</td><td>* %</td><td>M∕g<sup>·</sup></td></ci>		) - '	* %	M∕g <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" lwta="" td="" yg'<=""><td>Ι,</td><td>- \$`</td><td>- ) ·</td><td>M∕g<sup>·</sup></td></ci>	Ι,	- \$`	- ) ·	M∕g <sup>·</sup>
Gi WWggZi `` <ci '9 ="" ]hg'<="" g]b[="" td=""><td>1 '</td><td>) \$ .</td><td>&amp;) ·</td><td>Bc<sup>·</sup></td></ci>	1 '	) \$ .	&) ·	Bc <sup>·</sup>
<ci '5zzcfxuv]`]hmuh:9l="" ]lh²<="" g]b[="" td=""><td>1</td><td>) \$ .</td><td>B#5<sup>-</sup></td><td>B#5<sup>-</sup></td></ci>	1	) \$ .	B#5 <sup>-</sup>	B#5 <sup>-</sup>
91]hhc' <ca td="" y'yggbygg'<=""><td>1</td><td>O%\$<sup>·</sup></td><td>) .</td><td>NYg<sup>·</sup></td></ca>	1	O%\$ <sup>·</sup>	) .	NYg <sup>·</sup>
Dfc[fUa 'CWW dUbWhFUhY'	1	- ) ·	- ,	M∕g <sup>·</sup>
DUgg Dfc[fUa '7Yft]ZJWJt]cb'		DUgg:Wfh]Z]Wh]cb:	7ca d`]Ubhk ]h\ 7cbX]h]cbg	M∕g <sup>·</sup>
BY[Un]jYFYUgcbZcf@YUj]b[	1	&\$ ·	&) ·	NYg <sup>·</sup>
±oVfYUgY]b WUg\]bWda Y ffch\Yf h\Ub Ya d`cma YbHz7fca YbHfmhc Yl]hcfYbXcZfYdcfh]b[dYf]cX&	1	<b>'</b> \$`	)\$	<b>№</b> g <sup>·</sup>
≢oWfYUgY]b]bWtaYZfca Yad`cmaYbhïZfcaYbhfmhcYl]hcf YbXcZfYdcfh]b[dYf]cX&	Ι,	%) .	- '	Bc <sup>·</sup>

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX""

&, '\ci gY\c'Xg'k YfY'YI WI XYX'Zfca 'a YUgi fY'Xi Y'hc'W]Ybhg'fYg]X]b[']b'dfc'YWh'Ygg'h\Ub'' \*) 'XUng''

JC5C=l JUb 6i fYb J]``U[Y

<sup>3</sup> Cb`mgi WWggZi`\ci gY\c`X`YI]h\UX`nYfc`]bWta Y`UbX`fYbhUhYl]h/i bUV'Y`hc`WtW\UhY'a YUgi fY"

# : M&\$&\$ Dfc[fUa '9j U'i Uhjcb'

7UhY[cfm DYfa UbYbhGi ddcfh]j Y <ci g]b[

5[YbWhi MA 75]

 Dfc[fUa.
 (\$ K Ygh@cb[ GlfYYh]

 DYf]cX.
 +#%#% ! %&# %#%

DYfZcfa UbW. ... A YX]i a

MA 75 dfcj ]XYg %\$) ii b]hg cZdYfa UbYbhgi ddcfh]j Y\ci g]b[ hc a Yb k\c UfY Yl dYf]YbV]b[ \ca Y`YggbYgg UbX k\c \Uj Y`cbY`cf a cfY`X]gUV] ]h]Ygž]bWi X]b[ a YbhU`\YU'h\žgi VghUbW' UVi gYžUbX`XYj Y`cda YbhU`XY`Ung"\M 75 ghUZdfcj ]XYg VUg]Wg\_]``Vi ]X]b[ `UbX`gY`Z\WfY` dfc[ fUa a ]b[ žgi W\ Ug\n[]YbY`UbX`\ci gY\_YYd]b[ "'7UgY`a UbU[ Yfg`UggYgg'h\Y`bYYXg`cZYUW\`W]YbhUbX`a U\_Y`Uddfcdf]UhY`fYZYffU'g`hc a YbhU`\YU'h\žgi VghUbW`UVi gY`hfYUha Ybhž'UbX`ch\Yf`bYYXYX`Wa a i b]hmgYfj ]Wg"h\Y`MA 75 dUffbYfg'k]h\ U'j Uf]YhmcZch\Yf`U[ YbV]Yg`hc dfcj ]XY`ZccX`gYfj ]Wža YX]WU`VWfYžUbX`ch\Yf`gYfj ]Wg`hc fYg]XYbhg"H\Y`MA 75 Vi ]`X]b[ WabhU]bg`(\$' g]b[ Y`fcca cwwddbWhfGFCEUdUfha Ybhg`Zcf a U'Y`fYg]XYbhgž'Ug`kY``Ug`ghUZ'cZZ]Wgž'UZfcbhXYg\_žUbX`U`ci b[ Y`UfYU`Zcf`fYg]XYbhg"'

## Dfc[fUa 'Ci h/nta Y 5v/k]Yj Ya Ybh+#%#% 'hc'%&# %#% . 'DYfa UbYbh'Gi ddcfh]j Y '< ci g]b['

A YUgi fY		GYa ]!Ubbi Ư΄ ; cƯ΄	GYa]!UbbiU` 5 <b>Vh</b> iU`	5 <b>/\\]</b> Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" th="" yx``<=""><th></th><th>%%* ·</th><th>%&amp;\$ ·</th><th>M/g<sup>·</sup></th></ci>		%%* ·	%&\$ ·	M/g <sup>·</sup>
9l]hYX' <ci gy\c`xg%'<="" td=""><td></td><td>B#5<sup>-</sup></td><td>%) .</td><td>B#5<sup>-</sup></td></ci>		B#5 <sup>-</sup>	%) .	B#5 <sup>-</sup>
<ci 'ghuv]="" ]hm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>(+,</td><td>M∕g<sup>·</sup></td></ci>	A cbh\g	&( ·	(+,	M∕g <sup>·</sup>
H fbcj Yf'FUhY%'	1 .	%\$ <sup>·</sup>	%( '	B#5 <sup>-</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg''<=""><td></td><td>%\$( <sup>·</sup></td><td>%%&amp;<sup>.</sup></td><td>M∕g<sup>·</sup></td></ci>		%\$( <sup>·</sup>	%%& <sup>.</sup>	M∕g <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>1 .</td><td>- \$</td><td>_ ' '</td><td>M/g<sup>·</sup></td></ci>	1 .	- \$	_ ' '	M/g <sup>·</sup>
Gi WWggZi `` <ci '9 ="" ] hg'<="" g] b[="" td=""><td>1 .</td><td>) \$ .</td><td>(+,</td><td>M∕g<sup>·</sup></td></ci>	1 .	) \$ .	(+,	M∕g <sup>·</sup>
<ci '572cfxuv]`]lmuh'9l="" ]ln®<="" g]b[="" td=""><td>1 .</td><td>) \$ .</td><td>%\$\$<sup>.</sup></td><td>B#5<sup>-</sup></td></ci>	1 .	) \$ .	%\$\$ <sup>.</sup>	B#5 <sup>-</sup>
91]hhc < ca YYggbYgg	1 .	O%\$ ·	&.	M∕g <sup>·</sup>
Dfc[fUa 'CV <b>V</b> V dUbVVnFUhY'	1 .	-) ·	-) ·	M∕g <sup>·</sup>
DUgg Dfc[fUa 7YffjZ]Wlfjcb		DUgg Wfh]Z]Wh]cb	Bcb!7ca d`]Ubh	Bc <sup>·</sup>
BY[Uh]jYFYUgcbZcf@YUj]b[	1 .	&\$ ·	\$.	M∕g <sup>·</sup>
±5WfYUgY]bWlg\]bWlaYfth\Yf h\UbYad`cmaYbhLZfcaYbhfmhc Yl]hcfYbXcZfYdcfh]b[dYf]cX	1	<b>'</b> \$'	&( ·	Bc <sup>·</sup>
±oVfYUgY]b]bWtaYZfca Yad`cmaYbhžZfcaYbhfmhcYl]hcf YbXcZfYdcfh]b[dYf]cX	1	%) .	+ .	Bc <sup>·</sup>

&" '\ci gY\c`Xg'k]h\" \$ ]bWta Y'UbX" \$ fYbhUhYl]hk YfY'Yl Wl XYX Zfca 'WUW'Uh]cb"

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX""

<sup>&#</sup>x27;'&, '∖ci gY∖c`Xg`k YfY`Yl Wi XYX`2fca 'a YUgi fY`Xi Y`hc`W]Ybhg`fYg]X]b[`]b`dfc^YWf`Ygg`h\Ub''\*) XUng'''



**7UhY[cfm** DYfa UbYbhGi ddcfh]j Y < ci g]b[

5[YbWhi MA 75]

Dfc[fUa. (\$K Ygh@cb[GlfYYh9ldUbg]cb

DYf]cX. +#%#% ! %## %#%

DYfZcfa UbW.... A YX]i a

H\Y M 75 dfcj ]XYg", i b]rg cZdYfa UbYbhgi ddcfflj Y\ci g]b[ hc a Yb Yl dYf]YbV]b[ \ca Y`YggbYgg UbX`k\c`\Uj Y`cbY`cf a cfY`X]gUV]`]r]Ygž]bWi X]b[ a YbHJ`\YU`h\žgi VgHUbWi Uvi gYžUbX`XYj Y`cda YbHJ`XY`Ung"H\Y`Yl dUbg]cb dfc YvMicdYbYX`]b 5df]`&\$%( "M 75 gHJZ dfcj ]XYg`VUg]Wg\_]``Vi ]X]b[ UbX`gY`Z\WfY`dfc[ fUa a ]b[ žgi W\ Ug`\n[ ]YbY`UbX`\ci gY\_YYd]b[ "7UgY`a UbU[ Yfg`UggYgg`h\Y`bYYXg`cZYUW\ W]YbhUbX`a U\_Y`Uddfcdf]UhY`fYZYffU`g`hc a YbhJ`\YU`h\žgi VgHUbWi Uvi gY`hfYUha YbhžUbX`ch\Yf`bYYXYX`Wa a i b]lmgYfj ]Wg"H\Y`M 75` dUffbYfg`k ]h\ U'j Uf]YhmcZch\Yf`U[ YbV]Wg`hc dfcj ]XY`ZccX`gYfj ]Wza YX]WJ`WUfYžUbX`ch\Yf`gYfj ]Wg`hc fYg]XYbhg"H\Y`M 75`Vi ]`X]b[ `WbhU]bg`(\$' `g]b[ `Y`fcca `cWWdUbWhfGFCŁ UdUfha Ybhg`Zcfa U`Y`fYg]XYbhgžUg`k Y```Ug`gHJZcZZ]WYgžU`ZfcbhXYg\_žUbX`U``ci b[ Y`UfYU`Zcf`fYq]XYbhg"

## Dfc[fUa Ci h/k/a Y 5VK]Yj Ya Ybh+#%#% hc %&# %#%. DYfa UbYbhGi ddcfh]j Y < ci g]b[

A YUgi fY		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!Ubbi U' 5 <b>VM</b> U'	5 <b>W</b> (]Yj YX
<ci gy\c`xg'gyfj="" th="" yx''<=""><th>٠,</th><th>( &amp;<sup>·</sup></th><th>١ * '</th><th>Bc<sup>·</sup></th></ci>	٠,	( & <sup>·</sup>	١ * '	Bc <sup>·</sup>
9l]hYX´ <ci gy\c`xg%`<="" td=""><td></td><td>B#5<sup>-</sup></td><td>\$.</td><td>B#5</td></ci>		B#5 <sup>-</sup>	\$.	B#5
<ci "ghuv]`]hm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>( &amp; `</td><td>M/g<sup>-</sup></td></ci>	A cbh\g	&( ·	( & `	M/g <sup>-</sup>
Hifbcj Yf FUNY%	Ι.	%\$ ·	\$ <sup>.</sup>	B#5
Gi WWggZi`~ <ci 'ci="" g]b[="" hwta="" td="" yg''<=""><td>٠,</td><td>1</td><td>· * ·</td><td>M/g<sup>-</sup></td></ci>	٠,	1	· * ·	M/g <sup>-</sup>
Gi WWggZi` <ci g]b['ci="" hwta="" td="" yg'<=""><td>Ι.</td><td>- \$</td><td>%\$\$<sup>-</sup></td><td>M/g<sup>-</sup></td></ci>	Ι.	- \$	%\$\$ <sup>-</sup>	M/g <sup>-</sup>
Gi WWggZi` <ci g]b['9l]hg'<="" td=""><td>Ι.</td><td>) \$ .</td><td>B#5<sup>-</sup></td><td>B#5</td></ci>	Ι.	) \$ .	B#5 <sup>-</sup>	B#5
<ci 5zzcfxuv]`]hmuh9l="" ]hv≥<="" g]b[="" td=""><td>Ι.</td><td>) \$<sup>·</sup></td><td>B#5<sup>-</sup></td><td>B#5</td></ci>	Ι.	) \$ <sup>·</sup>	B#5 <sup>-</sup>	B#5
9l]hhc' <ca td="" y'yggbygg'<=""><td>Ι.</td><td>O%\$ ·</td><td>\$.</td><td>M/g<sup>-</sup></td></ca>	Ι.	O%\$ ·	\$.	M/g <sup>-</sup>
Dfc[fUa 'CWW dUbWhFUhY'	Ι.	%\$\$ <sup>.</sup>	- ) ·	M/g <sup>-</sup>
DUgg Dfc[fUa 7Yfh]ZJVVIh]cb		DUgg WrfhjZjWlhjcb	Bcb!7ca d`]Ubh	Bc <sup>·</sup>
BY[UhjjYFYUgcbZcf@YUj]b[	1 '	&\$ ·	B#5 <sup>-</sup>	B#5
±bWfYUgY]bWJg\]bWdaYfch\Yf h\UbYad`cmaYbHz7fcaYbhfmhc Yl]hcfYbXcZfYdcfh]b[dYf]cX&	1	· \$`	- *	Bc <sup>·</sup>
±bWfYUgY]b]bWtaYZfca Yad`cmaYbbzZfcaYbhfmhcYl]hcf YbXcZfYdcfh]b[dYf]cX&	Ι.	%) .	* '	Bc <sup>·</sup>

DfcYVMX]Xbch\UjY'Ubm\cigY\c`XYI]hg/ibUV'Yhc'VW'VV'UhY'aYUgifY"

MA 751 (\$ K Ygh@cb[ 91 dUbg]cb

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX""

<sup>&</sup>amp; \cigY\c'Xg'k YfY'Yl Wl XYX Zfca 'a YUgi fY'Xi Y hc'W]Ybhg'fYg]X]b[']b'dfc'YWfYgg'h\Ub'' \*) 'XUng'''

# : M&\$&\$ Dfc[fUa 9jUiUh]cb

7UhY[cfm] Dyfa UbybhGi ddcfhi y <ci qlb[

5[YbWn MA 75'

Dfc[fUa." : fUb `lb GhUhlcb DYfcX. +#%#% ! %&# %#%-

DYfZcfa UbW." <11/

HAY MA 75 z lb dUffbYfgA ld k lhA hAY 7c i a Vi g A Yhfodo ll lub < ci g lb [ 5i hA cf]hmf7A < 5L UbX hAY Gci h\YUqhiq'<YU'h\WUfY'Zcf'h\Y'<ca Y'Yqq': E<7ždfcj |XYq'+) 'i b|hq'cZdYfa UbYbhqi ddcfhij Y' \ci q]b[ Uh7A < 5Ng: fUb\_`]b GHUHcb UdUfha Ybhq Zcf X]qUV`YX a Yb UbX k ca Yb Yl dYf]YbVNb[ ' \ca Y`YggbYgg"H\Y`M\ 75`dfcj ]XYg`HYbUbhg`k ]h\ UWWgg`hc j Uf]ci g`gi ddcfh]j Y`gYfj ]Wygž ]bWi X]b[ WuqY a UbU[ Ya Ybhž Wf]q]q ]bhYfi Ybhcbžqi ddcfh[ fci dqz WcbZ]WhfYqc'i h]cb UbX a YX]Uh]cbždgnWk]Uhf]WgYfj ]WygžfYWtj YfmfYUX]bYgg gYfj ]WygžXU]`m`]j ]b[ 'g\_]``g'Ugg]ghUbWz d\ngj\W\#c\W\dUnjcbU\#a\YX\\W\gYfi \WqzfY\WYUnjcbU\#qc\\W]nUnjcb\cddcfh b\nj\yqzdYfqcbU\ a cbYma UbU[Ya Ybhž`Y[U`Uqq]qhUbW!#hYbUbhf][\hq`YXi WUh]cbz`hfUbqdcfhUh]cbz`UbX` ZccX#bi hf|h|cbU gYfj |Wyg"Gci h\YUghdfcj |XYg cbg|hY dfYj Ybh|j Y \YU'h\ UbX bi fg|b[ gYfj |Wyg" 7ca a i b]lmDfcdYfhYg cZC\]c dfci [XYg dfcdYfhma UbU[Ya YbhqYfi ]Wg" 5b cbq]hY 9a d'cna YbhFYgci fW 7YbhYf dfcj ]XYg UWYgg hc gY Z\Y'd gi ddcfhg hc YbUV'Y fYg]XYbhg hc ei ]W`mUWVqq`\ci q]b[žYa d`cma YbhžUbX`Wta a i b]hmqYfj ]Wvq"

Dfc[fUa Ci hMta Y 5VN]Yi Ya Ybh+#%#% hc %&# %#%. DYfa UbYbhGi ddcffi| Y <ci qib[

A YUgi fY		GYa ]!Ubbi U΄ ; cU΄	GYa]!UbbiU' 5V <b>h</b> iU'	5 <b>VN</b> ]Yj YX
<ci gy\c`xg'gyfj="" td="" yx<=""><td></td><td>1 '</td><td>, \$.</td><td>M/g<sup>·</sup></td></ci>		1 '	, \$.	M/g <sup>·</sup>
9l]hYX' <cigy\c`xg%'< td=""><td></td><td>B#5<sup>·</sup></td><td>&amp;<sup>·</sup></td><td>B#5<sup>·</sup></td></cigy\c`xg%'<>		B#5 <sup>·</sup>	& <sup>·</sup>	B#5 <sup>·</sup>
<ci 'ghuv]="" ]lm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;( ·</td><td>+\$.</td><td>M∕g<sup>·</sup></td></ci>	A cbh\g	&( ·	+\$.	M∕g <sup>·</sup>
Hi fbcj Yf'FUhY%'	1 '	%\$ ·	1 *	B#5 <sup>·</sup>
Gi WWggZi `` <ci 'ci="" g]b[="" l'wta="" td="" yg'<=""><td></td><td>+) .</td><td>+, ·</td><td>M/g<sup>·</sup></td></ci>		+) .	+, ·	M/g <sup>·</sup>
Gi WWggZi `` <ci 'ci="" g]b[="" l'wta="" td="" yg'<=""><td>1</td><td>- \$</td><td>- ,</td><td>M∕g<sup>·</sup></td></ci>	1	- \$	- ,	M∕g <sup>·</sup>
Gi WWggZi `` <ci '9 ="" ]hg'<="" g]b[="" td=""><td>1</td><td>) \$ .</td><td>\$.</td><td>Bc<sup>·</sup></td></ci>	1	) \$ .	\$.	Bc <sup>·</sup>
<ci 572cfxuv]="" ]h@<="" ]muh9l="" g]b[="" td=""><td>1</td><td>) \$ .</td><td>B#5<sup>·</sup></td><td>B#5<sup>·</sup></td></ci>	1	) \$ .	B#5 <sup>·</sup>	B#5 <sup>·</sup>
9l]hhc' <ca td="" y'yggbygg'<=""><td>1</td><td>O%\$ ·</td><td>( .</td><td>M∕g<sup>·</sup></td></ca>	1	O%\$ ·	( .	M∕g <sup>·</sup>
Dfc[fUa CVVVdUbVVnFUhY	1	- ) ·	%\$' ·	M∕g <sup>·</sup>
DUgg Dfc[fUa '7Yfh]Z]WUh]cb'		DUgg Wfh]Z]Wh]cb	Bcb!7ca d`]Ubh	Bc <sup>·</sup>
BY[Un]jYFYUgcbZcf@YUj]b[	Ι,	&\$ ·	\$ <sup>.</sup>	M/g <sup>-</sup>
±bWfYUgY]bWlg\]bWeaYfeth.Yf h\UbYad`cmaYbHcZfcaYbHfmhc YI]hcfYbXcZfYdcfh]b[dYf]cX&	1	' \$ <sup>·</sup>	1, .	<b>№</b> g⁻
±bWfYUgY]b]bWtaYZfca Yad`cmaYbhžZfcaYbhfmhcYl]h cfYbXcZfYdcfh]b[dYf]cX&	1	%) .	% ·	<b>№</b> g <sup>-</sup>

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX""

<sup>&</sup>amp; %%\cigY\c`Xg`k YfY`Yl Wl XYX Zfca 'a YUgi fY Xi Y`hc`W]Ybhg`fYg]X]b[ `]b`dfc^YVhr`Ygg`h\Ub'' \*) `XUng'''

CWM/dUbWnYlWYXg%\$\$ı XiYncdfcYVMgYfj]b[\caYYgg]bX]j]XiU'g]b bcb!\caYYggib]g"

<sup>(&#</sup>x27;Dfc'YVMX]X'bch'\Uj Y'Ubmgi WWggZ ``\ci gY\c`X'YI]hg/i bUV'Y'hc'WJ'WI'\UhY'a YUgi fY



**7UhY[cfm** DYfa UbYbhGi ddcfh]j Y < ci g]b[

5[YbVth: NA 75#<ca YZ ```
Dfc[fUa .'' =gU]U\ Dfc YVti
+#%# !'%# %#%

DYfZcfa UbW. ... A YX]i a

Cb i m/2 &\$%, žNA 75 hcc\_cj Yf \ci g]b[ i b]hg dfYj ]ci g`ma UbU[ YX Vm7ca a i b]hm<ci g]b[ BYHk cf\_UbX 7c`i a Vi g 5fYU +bHY[ fUHYX < YU H\ GYfj ]Wg"H\Y bi a VYf cZi b]hg k Ug fYXi WYX Zfca &&& hc %+( Xi f]b[ h\Y Zfghg]] a cbh\g cZh\Y Zg\W mYUf"NA 75 Wbh]bi YX hc fYXi W WdUV]hmhc ghUV]]nY h\Y dfc YVhz fYUW\]b[ %\$ i b]hg cb i m%z &\$% "' < ca YZ ``k Ug Vfci [ \h ]b UhH\Y ghUfncZ: N&\$&\$ hc HU\_Y cj Yf h\Y dfcdYfhma UbU[ Ya YbhUgdYVhg cZh\Y dfc[ fUa "' H\YgY i b]hg UfY XYX]\WhYX hc W\fcb]\W\`m\ca Y Ygg g]b[ Y UXi hg xX]gUV YX Vma YbhU ]`bYggz gi VghUbW UVi gYzcf Xi U X]U[ bcg]g" 7 ]Ybhg UfY \ci gYX ]b df]j UhY nhck bYX g]b[ Y VYXfcca cf YZ]\WybWhUdUfha Ybhg`cVWhX h\fci [ \ci h: fUb\_]b 7ci bhm'DUfn]\y]dUbhg UfY Ugg]ghYX hc cVhU]b UbX fYa U]b ]b dYfa UbYbh\ci g]b[ VmX]fYWhU\WYgg UbX#cf``]b\_U[ YžVmW]YbhWkc]\Wz hc ZYI ]V Yza i `h]!X]gV]d`]bUfnzUbX ]bX]j ]Xi U`]nYX gi ddcfhjj Y gYfj ]Wg XY`]j YfYX ]b UfUb[ Y cZ gYhn]b[ g"

Dfc[fUa Ci Mta Y 5 Nt]Yj Ya Ybh+#%#% hc %&# %#% . DYfa UbYbhGi ddcfhjj Y < ci g]b[

A YUgi fY		GYa ]!Ubbi ປ΄ ; cປ΄	GYa]!Ubbi U` 5V <b>h</b> i U`	5 <b>W</b> (]Yj YX
<ci gy\c`xg'gyfj="" td="" yx''<=""><td>,</td><td>%+ * ·</td><td>%* \$ ·</td><td>M∕g<sup>·</sup></td></ci>	,	%+ * ·	%* \$ ·	M∕g <sup>·</sup>
9l]hYX' <cigy\c`xg%'< td=""><td>, c</td><td>B#5<sup>-</sup></td><td>&amp;%<sup>-</sup></td><td>B#5<sup>-</sup></td></cigy\c`xg%'<>	, c	B#5 <sup>-</sup>	&% <sup>-</sup>	B#5 <sup>-</sup>
<ci 'ghuv]="" ]lm<="" g]b[="" td=""><td>A cbh\g</td><td>% .</td><td>%( '</td><td>Bc<sup>·</sup></td></ci>	A cbh\g	% .	%( '	Bc <sup>·</sup>
HifbcjYf'FUhY%'	1 '	%\$ <sup>·</sup>	%' ·	B#5 <sup>-</sup>
Gi WWggZi `` <ci 'ci="" g]b[="" lwta="" td="" yg&''<=""><td>,</td><td>%), ·</td><td>%( ( '</td><td>M∕g<sup>·</sup></td></ci>	,	%), ·	%( ( '	M∕g <sup>·</sup>
Gi WWggZi `` <ci 'ci="" g]b[="" hwta="" td="" yg&'<=""><td>1 '</td><td>- \$ `</td><td>-1 ·</td><td>M∕g<sup>·</sup></td></ci>	1 '	- \$ `	-1 ·	M∕g <sup>·</sup>
Gi WWggZi `` <ci '9 ="" ]hg&'<="" g]b[="" td=""><td>1 .</td><td>) \$ .</td><td>' %</td><td>Bc<sup>·</sup></td></ci>	1 .	) \$ .	' %	Bc <sup>·</sup>
<ci '5z="" '<="" ]hv≥="" cfxuv]`]hmuh9l="" g]b[="" td=""><td>1 .</td><td>) \$ .</td><td>%\$\$<sup>.</sup></td><td>B#5<sup>-</sup></td></ci>	1 .	) \$ .	%\$\$ <sup>.</sup>	B#5 <sup>-</sup>
91]hhc' <ca td="" y'yggbygg%'<=""><td>1 '</td><td>O%\$ ·</td><td>( .</td><td>M∕g<sup>·</sup></td></ca>	1 '	O%\$ ·	( .	M∕g <sup>·</sup>
Dfc[fUa 'CWW dUbWhFUhY'	1 '	- ) ·	, ) ·	Bc <sup>·</sup>
DUgg Dfc[fUa '7Yfh]Z[VVIh]cb'		DUgg WffjZWhjcb	7ca d`]Ubhk ]h\ 7cbX]h]cbg	<b>M</b> ∕g⁻
BY[Uh]jYFYUgcb:Zcf:@YUj]b[&:	1 '	&\$ ·	\$.	M∕g <sup>·</sup>
±5WfYUgY]bWlg\]bWlaYfth\Yf h\UbYad`cmaYbHzZfcaYbHfmhc Yl]hcfYbXcZfYdcfh]b[dYf]cX&z	1	'\$	&( ·	Bc <sup>*</sup>
±bWfYUgY]b]bWtaYZfca Yad`cmaYbhžZfcaYbhfmhcYl]h cfYbXcZfYdcfh]b[dYf]cX <sup>&amp;</sup> √	1	%) .	& <sup>-</sup>	Bc <sup>·</sup>

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX""

&') XYWYUgYX'\ci gY\c`X'k YfY'YI WI XYX'Zfca 'a YUgi fY'''

``&`\cigY\c`Xg`k]jh\``\$`]bWdaY`UbX``\$`fYbhUhYl]jhkYfY`YlWlXYX`Zfca`WUWl\`Uhjcb"`

MA 75#<ca YZi ```İ `=gU]U\`

<sup>(&</sup>quot;(\ci\_qY\c`Xg`k YfY YI Wi XYX`Zfca 'a YUgi fY Xi Y`hc`WjYbhg`fYg]X]b[']b`dfc^YVh`Ygg'h\Ub' \*) 'XUng''

# : M&\$&\$ Dfc[fUa '9; Ui Uh]cb

7UhY[cfm DYfa UbYbhGi ddcfh]j Y <ci g]b[

5[YbWhi . MA 75.

DYfZcfa UbW.... <][\.

H\Y'dfc'YVMidfcj ]XYg'dYfa UbYbhgi ddcfhjj Y'\ci gjb[ Zcf') \$ X]gUV'YX'a Ybžk ca YbžUbX' Wti d'Yg'k\c'UfY'Yl dYf]YbVMb['\ca Y'YggbYgg"'7`]Ybhg'gYfj YX']bWi XY'h\cgY'k]h\ a YbhU' ]`bYgg'UbX'W\Ya ]\W' XYdYbXYbWhj]ggi Yg"'7`]Ybhg'UfY'\ci gYX']b'dfjj UhY'n!ck bYX'g]b['Y' VYXfcca 'cf'YZ]VMYbWhUdUfha Ybhg'cWUhYX'h\fci [\ci h: fUb\_`]b'7ci bhn'GhUZZdfcj ]XYg' gi ddcfhjj Y'gYfj ]\W'g'hc'\Y'd'V]Ybhg'gi ghU]b'\ci g]b['h\fci [\ 'W\ygY'a UbU[Ya Ybhz\Wf]g]g' ]bhYfj Ybh]cbž`]b\_U[Yk]h\ Wta a i b]hngYfj ]\W'gz'Ugg]gh]b['W]Ybhg'k]h\ "YUfb]b['XU]\m`]j ]b['gz'VYbYZ]hYbfc``a Ybhz'hfUbgdcfh]b['W]Ybhg'hc YggYbh]U''UMjj ]hjYg'fY"['zXcWtcff\yg' Uddc]bha Ybhgtza cb]hcf]b['W]Ybhg\NUdUfha Ybhgz'UbX'ch\Yf'gYfj ]\W'g'''

MA 75 hcc\_'cj Yf'h\Y'gWUhYfYX'g]hYg'i b]hg'Zfca '7c`i a Vi g'5fYU'±bHY[fUhYX'<YU'h\'GYfj]WYg'cb' >Ubi Ufm'%~2&\$% "'

Dfc[fUa Ci hMca Y 5VN]Yj Ya Ybh+#%#% hc %&# %#% . DYfa UbYbhGi ddcfhjj Y <ci gjb[

A YUgi fY		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!UbbiU` 5V <b>h</b> iU`	5 <b>VN</b> ]Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" th="" yx''<=""><th></th><th>)) .</th><th>* * '</th><th>M/g<sup>·</sup></th></ci>		)) .	* * '	M/g <sup>·</sup>
9l]hYX´ <cigy\c`xg%`< td=""><td></td><td>B#5<sup>-</sup></td><td>( '</td><td>B#5<sup>-</sup></td></cigy\c`xg%`<>		B#5 <sup>-</sup>	( '	B#5 <sup>-</sup>
<ci "ghjv]`]hm<="" g]b[="" td=""><td>A cbh\g</td><td>&amp;%<sup>-</sup></td><td>&amp;\$ ·</td><td>M∕g<sup>·</sup></td></ci>	A cbh\g	&% <sup>-</sup>	&\$ ·	M∕g <sup>·</sup>
H fbcj Yf'FUH/%'	1 .	%\$ ·		B#5 <sup>-</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg''<=""><td></td><td>) \$ '</td><td>* &amp; `</td><td>M/g<sup>-</sup></td></ci>		) \$ '	* & `	M/g <sup>-</sup>
Gi WWggZi`~ci g]b['Ci HWta Yg'	1 .	- \$ <sup>·</sup>	- ( ·	M/g <sup>-</sup>
Gi WWggZi `` <ci '9i="" ]hg'<="" g]b[="" td=""><td>1 .</td><td>) \$ '</td><td>\$<sup>.</sup></td><td>Bc<sup>·</sup></td></ci>	1 .	) \$ '	\$ <sup>.</sup>	Bc <sup>·</sup>
<ci '5zzcfxuv]`]m*un'9l="" ]lf<sup="" g]b[="">@( '</ci>	1 .	) \$ '	B#5 <sup>-</sup>	B#5 <sup>-</sup>
9l]hhc' <ca td="" y'yggbygg'<=""><td>1 '</td><td>O%\$ ·</td><td>&amp;<sup>-</sup></td><td>M∕g<sup>·</sup></td></ca>	1 '	O%\$ ·	& <sup>-</sup>	M∕g <sup>·</sup>
Dfc[fUa 'CWW/dUbWhFUhY&'	1 .	-) ·	%&( ·	M/g <sup>-</sup>
DUgg Dfc[fUa '7Yfh]Z]VVh]cb'		DUgg Wfh]Z]VVh]cb	7ca d`]Ubhk ]h\ 7cbX]h]cbg	M/g <sup>-</sup>
BY[UnijYFYUgcbZcf@YUj]b[	Ι.	&\$ ·	\$.	M/g <sup>·</sup>
±bWfYUgY]bWlg\]bWlfaYfch\Yfh\UbYad`cmaYbHcZfcaYbHfmhc Yl]hcfYbXcZfYdcfh]b[dYf]cX	1	<b>'</b> \$'	( - ·	M/g <sup>-</sup>
±bWfYUgY]b]bWtaYZfca Yad`cnaYbhzZfcaYbhfmhcYl]hcf YbXcZfYdcfh]b[dYf]cX	I '	%) .	, .	Bc <sup>·</sup>

<sup>%&</sup>quot;A cb]hcfYXžVi hbchYj U'i UhYX""

&: i bX]b[ 'U`ck g'cj Yf 'YUg]b[ 'Zcf'h\]g'dfc'YVM''

0/

<sup>``+`\</sup>ci`gY\c`Xg`k`YfY`YI Wi`XYX`Zfca `a YUgi fY`Xi Y`hc`W]Ybhg`fYg]X]b[`]b`dfc^YWf`Ygg`h\Ub'' \*) `XUng''`

<sup>(&#</sup>x27;Dfc'YVMX]X'bch'\Uj Y'Ubmgi WWggZ ``\ci gY\c`X'YI]hg/i bUV'Y'hc'WJ'WI'\UhY'a YUgi fY



**7UHY cfm** DYfa UbYbhGi ddcfh Y <ci q]b[

DYf]cX. +#\/#\% ! \%\#' \/#\%

DYfZcfa UbW.... <][\.

H\Y\MK 75 K \( \Bar{\text{B}} \) G'dfc[fUa 'dfcj]XYg'dYfa UbYbhgi ddcfhjj Y\ci g]b[ '\Zcf' - %\ca Y\Ygg'k ca Yb'k\c\Uj Y'U'gYf]ci g'a YbhU'']\`b\Ygg''H\Y'dfc\YVMk Ug'YbhjfY`mfYbcj UhYX'UbX'U\`h\Y'i b]hg'fY\UV]]hUhYX\Zdfcj]X]b[ 'Y\ZJ\Wb\Min' b]hg'hc \( U^\*\)g]b[ 'Y'k ca Yb'gYfj YX"'H\fci [\'h\Y' fY\UV]]hUhY\Zdfcj]X\Jb k cf\_ h\Y'dfc\Y\Min' \WdU\Mm]b\WY\Ug\X'\Zfca '\* - i b]hg'hc - %i b]hg'' K \( \Bar{\text{B}} \); G'c\ZYfg' \\WgY'a UbU[ Ya Ybh\Z\ci g]b[ 'UbX Ya d'cma YbhUgg]ghUb\W\ZfY\ZYffU'g'hc a YX]\W'\Za YbhU'\\\Y\U'\h\Z\UbX'gi \VghUb\W'\UVi gY'ff\Uha Ybhdfc[fUa g\Z\Ug'\k\Y\`'\Ug\`]b\_U[Yg'hc ch\Yf'\ka a i b]hm f\ygci f\Wg''Cbg]hY'gi \VghUb\W'\UVi gY'g\fj \]\W'g'UfY'dfcj \]X\YX'\\fci [\'d\Ufhb\Yfg\]dg'k \]\\\ 5'j \]g\#5a Yh\nghUbX'ch\Yf'g\fj \]\W'dfcj \]X\Yfg''''

Dfc[fUa 'Ci h/nta Y 5v/k]Yj Ya Ybh+#%#% 'hc'%&# %#% . 'DYfa UbYbh'Gi ddcfh]j Y '< ci g]b['

A YUgi fY		GYa ]!Ubbi ປ΄ ; cປ΄	GYa]!Ubbi U' 5 <b>Wi</b> U'	5 <b>/\(\)</b> ]Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" td="" yx''<=""><td></td><td>%\$\$<sup>.</sup></td><td>- %</td><td>M/g<sup>-</sup></td></ci>		%\$\$ <sup>.</sup>	- %	M/g <sup>-</sup>
91]hYX' <ci gy\c`xg%'<="" td=""><td></td><td>B#5<sup>-</sup></td><td>&amp;`</td><td>B#5<sup>-</sup></td></ci>		B#5 <sup>-</sup>	&`	B#5 <sup>-</sup>
<ci 'ghjv]`]hm<="" g]b[="" td=""><td>A cbh g</td><td>&amp;( ·</td><td>( %</td><td>M∕g<sup>·</sup></td></ci>	A cbh g	&( ·	( %	M∕g <sup>·</sup>
H fbcj Yf'FUHY%''	1	%\$ ·	& <sup>·</sup>	B#5 <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" lwta="" td="" yg'<=""><td></td><td>- \$</td><td>- \$ .</td><td>M/g<sup>·</sup></td></ci>		- \$	- \$ .	M/g <sup>·</sup>
Gi WWYggZi`` <ci g]b['ci="" lwta="" td="" yg&'<=""><td>1 '</td><td>- \$ '</td><td>%\$\$<sup>.</sup></td><td>M/g<sup>·</sup></td></ci>	1 '	- \$ '	%\$\$ <sup>.</sup>	M/g <sup>·</sup>
Gi WWggZi `` <ci '9 ="" ] hg&'<="" g] b[="" td=""><td>1 '</td><td>) \$ '</td><td>%\$\$<sup>.</sup></td><td>M/g<sup>·</sup></td></ci>	1 '	) \$ '	%\$\$ <sup>.</sup>	M/g <sup>·</sup>
<ci '572cfxuv]`]hmuh9l="" ]hquaz<="" g]b[="" td=""><td>1 '</td><td>) \$ .</td><td>%\$\$<sup>.</sup></td><td>B#5<sup>-</sup></td></ci>	1 '	) \$ .	%\$\$ <sup>.</sup>	B#5 <sup>-</sup>
9l]hhc <ca td="" yyggbygg<=""><td>1 '</td><td>O%\$ ·</td><td>\$.</td><td>M/g<sup>·</sup></td></ca>	1 '	O%\$ ·	\$.	M/g <sup>·</sup>
Dfc[fUa 'CWW/dUbWhFUhY'	1 '	-) ·	- , `	M/g <sup>·</sup>
DUgg Dfc[fUa '7Yffj]ZJWJrjcb'		DUgg Wft]Z]Wlt]cb	7ca d`]Ubhk ]h\ 7cbX]hjcbg	M/g <sup>·</sup>
BY[UhjjYFYUgcbZcf@YUj]b[&	1	&\$ ·	\$.	M/g <sup>-</sup>
±bWfYUgY]bWlg\]bWlaYfth\Yf h\UbYad`cmaYbhLZfcaYbhfmhc Yl]hcfYbXcZfYdcfh]b[dYf]cX&z	1	<b>'</b> \$'	((:	<b>№</b> g <sup>-</sup>
±bWfYUgY]b]bWtaYZfca Yad`cmaYbhžZfcaYbhfmhcYl]h cfYbXcZfYdcfh]b[dYf]cX <sup>®Z</sup>	1	%) .	%( ·	<b>№</b> g <sup>-</sup>

<sup>%&#</sup>x27;A cb]hcfYXžVi hbchYj U'i UhYX"

<sup>&</sup>amp; "%XYWYUgYX"\ci gY\c'X'k Ug'YI WI XYX Zfca 'a YUgi fY"

<sup>&#</sup>x27;'-'\ci gY\c`Xg`k YfY`YI WI XYX`Zfca 'a YUgi fY`Xi Y`hc`W]Ybhg`fYg]X]b[']b`dfc^YWf`Ygg`h\Ub''\*) `XUng''`

# HfUbg]h]cbU^<ci g]b[ '



7UHY[cfmHfUbg]h]cbU`<ci g]b[</th>5[YbWm<i W\_YVYffm<ci gYž±bW'</th>Dfc[fUaHfUbg]h]cbU`@j ]b[ DfcYVM

DYf]cX. +#%#% ! %&# %#%

DYfZcfa UbW. · · A YX]i a ·

H\Y'HfUbg]h]cbU'@j ]b[ DfcYVhidfcj ]XYg&( 'UdUfha Ybhg'hc'a i 'h]!dfcV'Ya žc`XYf'UXc`YgWhbž\ca Y`Ygg'nci h\"H\Y'dfc[fUa ']g'Ub'% !a cbh\ dfc[fUa 'h\UngYfj Yg'nci h\"+h\Y'dfc[fUa ']g'Ub'% !a cbh\ dfc[fUa 'h\UngYfj Yg'nci h\"+h\Y'h\Y]f'ck b 'W\]XfYb"H\Y'H\Y'H\Y'H\Y'h\J]f'ck b 'W\]XfYb"H\Y'H\Y'H\Y'H\Y'h\J]f'ck b 'W\]XfYb"H\Y'H\Y'H\Y'H\Y'h\J]f'cbU'@j ]b[ 'DfcYVhidfcj ]XYg']bXYdYbXYbh`]j ]b[ 'g\_]``]bghfi Wh]cbža YbhU`\YU'h\ ]bhYfj Ybh]cbžWf]g]g gi ddcfhžUgg]ghUbW'k ]h\ 'UWWgg'UbX``]b\_U[Y'hc Wa a i b]hmfYgci fWlgžYXi Wh]cbU'UbX'j cWh]cbU'gi ddcfhžYXi Wh]cb cb\i a Ub'gYI U']hm]bWi X]b[ 'dUfYbh]b[ gi ddcfhUbX``]b\_U[Y'hc UXX]h]cbU'dUfYbh]b[#V]fh\]b[ 'WUggYgžWti bgY`]b[ 'gYfj ]WygžUbX'hUbg]h]cbU'gYfj ]Wyg'hc cVhU]b'dYfa UbYbh\ci g]b[""

H\Y'dfc[fUa 'WUdUW]\mik Ug`fYXi W'X'hc`&(`ib]\hg`]\b`: M&\$\%\$žZfca 'U'dfYj]cig' \$!ib]\hWUdUW]\min' 5g`cZ5df]` &\$\% žh\Y'dfc^YV\hi]\b\WYUgYX`]\hg`V\UdUV]\minc`&, 'ib]\hg''\do: M&\$\% žh\Y'HfUbg]\hjcbU` @j`]\b['Dfc^YV\hiUXXYX`Ub`UXX]\hjcbU` \%\$ ib]\hg`XYg][bYX'\hc`gYfj Y`c`XYf`UXc`Yg\Wb\z`\caY`Ygg` notih`k\c'UfY'j]\Mjag`cZXcaYg\hj\Wj]c`Yb\W'''H\YgY'ib]\hg`UfY'bch]\b\WiXYX`]\b'h\]g`fYdcfh''\do: \xi\X'\X'\U\W\_hc`&(`ib]\hg'''

## Dfc[fUa Ci hWta Y 5Wk]Yj Ya Ybh+#%#% hc %&# %#% . HfUbg]hjcbU <ci g]b[

A YUgi fY <sup>.</sup>		GYa ]!Ubbi Ư˙ ; cƯ˙	GYa]!Ubbi ປ΄ 5 <b>Vhi</b> ປ΄	5 <b>VN]</b> Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" td="" yx''<=""><td></td><td>1 _ 1</td><td>' &amp;<sup>.</sup></td><td>Bc<sup>·</sup></td></ci>		1 _ 1	' & <sup>.</sup>	Bc <sup>·</sup>
9l]hYX' <cigy\c`xg%'< td=""><td></td><td>%%<sup>.</sup></td><td>%\$ ·</td><td>B#5<sup>-</sup></td></cigy\c`xg%'<>		%% <sup>.</sup>	%\$ ·	B#5 <sup>-</sup>
<ci 'ghjv]`]hm<="" g]b[="" td=""><td>A cbh\g</td><td>%\$ <sup>.</sup></td><td>- ·</td><td>M/g<sup>·</sup></td></ci>	A cbh\g	%\$ <sup>.</sup>	- ·	M/g <sup>·</sup>
Gi WWyggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td></td><td>,</td><td>+ .</td><td>M/g<sup>·</sup></td></ci>		,	+ .	M/g <sup>·</sup>
Gi WWyggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>1 .</td><td>++.</td><td>+\$`</td><td>Bc<sup>·</sup></td></ci>	1 .	++.	+\$`	Bc <sup>·</sup>
FYVJJX]j ]ga	1 .	O%\$ ·	%% <sup>.</sup>	M/g <sup>·</sup>
Dfc[fUa 'CWW/dUbWhFUhY'	1 '	- , '	- &`	Bc <sup>·</sup>
DUgg Dfc[fUa '7YffjZjVVlfjcb'		DUgg WftjZWhjcb	7ca d`]Ubhk ]h\ 7cbX]h]cbg	M/g <sup>·</sup>
BY[Un]jYFYUgcbZcf@YUj]b[	Ι.	&\$ ·	&\$ <sup>·</sup>	M/g <sup>-</sup>
±bWfYUgY]bWlg\]bWlaYflch\Yf h\UbYad`cmaYbhlc2fcaYbhfmhc Yl]h	1	- \$	\$.	Bc <sup>·</sup>
±bWfYUgY]b]bWcaYZfca Yad`cmaYbhzZfcaYbhfn~hcYl]h	1	%) .	&\$ ·	M/g <sup>·</sup>

 $<sup>\</sup>label{eq:continuity} \parkspace{2mm} \parks$ 

# : M&\$&\$ Dfc[fUa 9; Ui Uhcb

7UhY[cfm HfUbg]h]cbU <ci g]b[ 5[YbWm <i w\_YVYffm<ci gYž±bW

Dfc[fUa. HfUbg]h]cbU @j ]b[ DfcYVMF<NF

DYf]cX. +#%#% ! %&# %#%

DYfZcfa UbW." < ][\"

H\Y'HTUbg]h]cbU'@j ]b[ DfcYVMiF < Mdfcj ]XYg'+ UdUfha Ybhg'hc a i `h]!dfcV'Ya žc`XYf' UXc`YgW'bhž\ca Y`Ygg'nci h\"'H\Y'dfc[fUa ']g'Ub'% !a cbh\ dfc[fUa 'h\UhgYfj Yg'nci h\"%+ hc && mYUfg'cZU[Y"'#hUgc dfcj ]XYg'hfUbg]h]cbU'\ci g]b[ Zcf'hYYb'dUfYbhg'k\c\Uj Y'h\Y]f'ck b \\X\]XfYb"'H\Y'HfUbg]h]cbU'@j ]b[ Dfc'YVMidfcj ]XYg']bXYdYbXYbh']j ]b[ 'g\_]```]bghfi VMjcbža YbhU'\YU'h\ ]bhYfj Ybh]cbž\W]g]g'gi ddcfhž\Ugg]ghUbW'k]h\ UWWYgg'UbX``]b\_U[Y'hc Wa a i b]hm fYgci f\WgzYXi \Wh]cbU'`UbX'j c\Wh]cbU'`gi ddcfhžYXi \Wh]cb cb\\i a Ub'gYI i U']hm]b\Wi X]b[ 'dUfYbh]b[ 'gi ddcfhiUbX``]b\_U[Y'hc UXX]h]cbU'`dUfYbh]b[#V]ff\]b[ 'WUggYgz'\Wi bgY`]b[ 'gYfj ]\Wgz' UbX'hfUbg]h]cbU'`gYfj ]\Wg'hc c\VhJ]b dYfa UbYbh\ci g]b["''

# Dfc[fUa Ci hWta Y 5Wk]Yj Ya Ybh+#%#% hc %&#' %#% . HfUbg]hjcbU <ci gjb[

A YUgi fY		GYa ]!Ubbi ປ΄ ; cປ΄	GYa]!Ubbi U' 5V <b>h</b> i U'	5 <b>V\()</b> Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" th="" yx''<=""><th></th><th></th><th>%%<sup>:</sup></th><th>M∕g<sup>·</sup></th></ci>			%% <sup>:</sup>	M∕g <sup>·</sup>
9I ]hYX' <ci gy\c`xg&'<="" td=""><td></td><td>&amp;<sup>.</sup></td><td>( .</td><td>B#5<sup>-</sup></td></ci>		& <sup>.</sup>	( .	B#5 <sup>-</sup>
<ci 'ghjv]`]hm<="" g]b[="" td=""><td>A cbh\g</td><td>%&amp;<sup>.</sup></td><td>* '</td><td>M∕g<sup>·</sup></td></ci>	A cbh\g	%& <sup>.</sup>	* '	M∕g <sup>·</sup>
Gi WWggZi`~ <ci 'ci="" g]b[="" hwta="" td="" yg'<=""><td></td><td>%</td><td>1 1</td><td>M/g<sup>·</sup></td></ci>		%	1 1	M/g <sup>·</sup>
Gi WWyggZi`~ <ci g]b['ci="" hwta="" td="" yg'<=""><td>1 .</td><td>++.</td><td>+) .</td><td>M∕g<sup>·</sup></td></ci>	1 .	++.	+) .	M∕g <sup>·</sup>
FYVIJX]j ]ga ' '	1 .	O%\$ ·	B#5 <sup>-</sup>	B#5 <sup>-</sup>
Dfc[fUa 'CWW/dUbWhFUhY'	1 .	-, '	%\$\$ <sup>.</sup>	M∕g <sup>·</sup>
DUgg Dfc[fUa 7YffjZ]WVhjcb		DUgg WfhjZwhcb	B#5 <sup>-</sup>	B#5 <sup>·</sup>
BY[Un]jYFYUgcbZcf@YUj]b[	1 .	&\$ ·	&) ·	M/g <sup>-</sup>
±0 W7Y UgY ]b WUg\ ]b Wta Y ftth Yf h\Ub Ya d`cma Ybht Zfca Ybhfmhc Yl]h	1	<b>'</b> \$`	\$.	Bc'
±bWfYUgY ]b ]bWca Y Zfca Ya d`cna YbhžZfca Ybhfmhc Yl]h	1	%) .	+)	M/g <sup>-</sup>

Dfc: YVM hcc byk Zcfa YUgi fy hc VY VVV VV UhYX'''

<sup>%</sup> Dfc[fUa bchZ bXYX Vm7G6

<sup>&</sup>amp; A cb]hcfYXžVi hbchYj U'i UhYX/\ck Yj Yfžh\]g WUb ]a dUWhch\Yf gi WWgg a YUgi fYg"



7UhY[cfm HfUbg]h]cbU`<ci g]b[

5[YbWh JcibhYyfgcZ5a Yf]WJC\]c/ \dag{\begin{align\*} \dag{\begin}} \dag{\begin{align\*} \dag{\begin{align\*} \dag{\begin{align\*}

**Dfc[fUa**. JYhYfUbg]hJcbU`<cig]b[%

DYf[cX.' +#%#% ! %# %#%

DYfZcfa UbWr. A YX]i a

Jc'i bhYYfg'cZ5a Yf]WJ'cdYfUhYg'U'' \*!VYX'hfUbg]h]cbU`'\ci g]b['dfc[fUa 'Zcf'JYhYfUbg"H\Y' df]a Ufm[cU'g'cZh\Y'dfc[fUa 'UfY'hc'Ugg]gh\ca Y'Ygg'j YhYfUbg'hc'UW\]Yj Y'fYg]XYbh]U'ghUV]`]mž hc']bWfYUgY']bWta Y'UbX#cf'g\_]```Yj Y'žUbX'hc'XYj Y'cd'[fYUhYf'gY`ZXYhYfa ]bUh]cb"'H\Y' dfc[fUa 'WJdUW]mk Ug'fYXi WYX'hc'' \* i b]hg'Zfca 'U'dfYj ]ci g'(\$ i b]hg'Ug'cZCVMcVYf'%~2&\$%"

## Dfc[fUa Ci h/nta Y 5VN]Yj Ya Ybh+#%#% hc %&# %#% . HfUbg]hjcbU <ci g]b[

A YUgi fY		GYa ]!Ubbi Ư΄ ; cƯ΄	GYa]!Ubbi Ư΄ 5 <b>Vh</b> i Ư΄	5 <b>\%]</b> Yj YX <sup>.</sup>
<ci gy\c`xg'gyfj="" td="" yx''<=""><td></td><td>%\$\$<sup>.</sup></td><td>%%%</td><td>M/g<sup>·</sup></td></ci>		%\$\$ <sup>.</sup>	%%%	M/g <sup>·</sup>
9I]hYX' <ci gy\c`xg&''<="" td=""><td></td><td>) \$ .</td><td>, \$`</td><td>B#5<sup>-</sup></td></ci>		) \$ .	, \$`	B#5 <sup>-</sup>
<ci 'ghuv]`]lmi<="" g]b[="" td=""><td>A cbh\g</td><td>( .</td><td>&amp;<sup>.</sup></td><td>M/g<sup>·</sup></td></ci>	A cbh\g	( .	& <sup>.</sup>	M/g <sup>·</sup>
Gi WWggZi`~ <ci ci="" g]b[="" hwta="" td="" yg''<=""><td></td><td>' _ '</td><td>(('</td><td>M/g<sup>·</sup></td></ci>		' _ '	(('	M/g <sup>·</sup>
Gi WWggZi`` <ci g]b['ci="" hwta="" td="" yg'<=""><td>1 .</td><td>++ .</td><td>)).</td><td>Bc<sup>·</sup></td></ci>	1 .	++ .	)).	Bc <sup>·</sup>
FYVJX]j ]ga '	1 .	O%\$ ·	% .	Bc <sup>·</sup>
Dfc[fUa 'CWW/dUbWhFUhY'	1 .	-) ·	, - '	Bc <sup>·</sup>
DUgg:Dfc[fUa '7Yft]ZJVVIt]cb'		DUgg WffjZJWlfjcb	7ca d`]Ubhk]h\ 7cbX]hJcbg	M∕g <sup>·</sup>
BY[Uh]jYFYUgcbZcf@YUj]b[	1 .	&\$ ·	* '	M/g <sup>·</sup>
±0WfYUgY]bWbg\]bWbaYfbh\Yf h\UbYad`cmaYbhbZfcaYbhfmhc Yl]h	1 .	- \$	( .	Bc <sup>·</sup>
±bWfYUgY]b]bWtaYZfca Yad`cmaYbhžZfcaYbhfmhcYl]h	1	%) .	%	Bc <sup>·</sup>

-

<sup>%</sup> Dfc[fUa bch2 bXYX Vm7G6"

<sup>&</sup>amp; A cb]hcfYXžVi hbchYj U'i UhYX/\ck Yj Yfžh\]g VVIb ]a dUVNich\Yf gi VVVgg a YUgi fYg"

A YthcXc`c[m



# : M&\$&\$ GnghYa 9j Ui Uhjcb A Yh\cXc`c[ m

Cj Yfj ]Yk

## 5"Di fdcqY

9UW. mYUF7G6 YghUV]g\Yg'U'dYfZcfa UbW'd`Ub'Zcfh\Ya YbNg'Ya Yf[YbWmg\Y`hYf'gnghYa žk ca YbNg'Ya Yf[YbWmg\Y`hYf'gnghYa žZUa]mYa Yf[YbWmg\Y`hYf'gnghYa ždYfa UbYbh gi ddcfh]j Y`\ci g]b['gnghYa žh\Y`Ybh]fY Ya Yf[YbWmg\Y`hYf'gnghYa žYa Yf[YbWmg\Y`hYf'gnghYa žYa Yf[YbWmg\Y`hYf'gnghYa žYa Yf[YbWmg\Y`hYf'gnghYa žYa Yf[YbWmg\Y`hYf'gnghYa žYa Yf[YbWmg\Y`hYf'gnghYa žYa Yf[YbWmg\Y`hYf'gnghYa žYa Yf[YbWmg\Y`hYf'gnghYa Zcfh\Y`fUd]X`fY!\ci g]b['gnghYa zdfYj Ybh]cb'gnghYa zdfh\Y'di fdcgY'cZdfc[fUa 'd`Ubb]b['UbX'a cb]hcf]b['gnghYa 'dYfZcfa UbW'a YUgi fYX'U[U]bghi 7G6 '9bXg'Dc`]Wyg'UbX'Ubh]WjdUhYX'dYfZcfa UbW'''''

## 6"'A cb]hcf]b[ '

GnghYa 'dYfZcfa UbW' a YUgi fYg'UfY a cb]hcfYX cb U'ei UfhYf`nžigYa]!Ubbi UžUbX Ubbi U'VUg]g'''GnghYa '\dangle X]Whcfg'F Ydcfhg'UfY di V']g\YX ei UfhYf`ndbX' \overline{1} fb]g\YX'hc '7G6'hfi ghYYgžh\Y'7cbh]bi i a 'cZ7UfY'''5bbi U'dfc[fUa 'Yj U'i Uh]cbg'UfY' di V']g\YX'VUgYX'cb'h\Y'Z]fghgYa]!Ubbi U'dUfhbYfg\]d 'dYf]cX'dYfZcfa UbW' UbX'g\UfYX'k]h\'\NY'UZcfYaYbh]cbYX'Ybh]h]Yg'''5``fYdcfhg'UfY'dcghYX'hc'kkk'\wg\V'cf["'FYgi 'hg'UfY'U'gc'g\UfYX'k]h\'\7G6'\overline{2} bXYfg'\wbg]ghYbhk]h\'\overline{2} bX]b['\wbfU\wfg'UbX'U[fYYaYbhg''

## Di fdcqYž8YZ|b]hcbž; cU!qYhhb[ / FYdcfhb[ A Yh\cXc`c[]Yq(in alphabetical order)

- **%** Average Daily Waitlist Number (#):
  - UŁ **Di fdcgY**. 5 fYUgcbUV mick k U]h]ghbi a VYfi]bX]WUhYg h\Y gnghYa i]gia YYh]b[ih\Yi XYa UbX ZcfiYa Yf[YbWhg\YihYf"
  - VŁ GnghYa g. G]b[`Y 5Xi `h'9a Yf[YbWhG\Y`hYf
  - W. **8YZ|b]hcb.** HvY'Uj YfU[Y'bi a VYf'cZkU]h]ghYX'W]Ybhg'fYdcfhYX'cb'hvY'8U]`m'6YX`]gh' FYdcfh'
  - XŁ; cU!gYH]b[ a Yh\cXc`c[mB#5
  - YE **FYdcffjb[ a Yfh.cXc`c[ m** HcHJ bi a VYf`cZk U]h]ghYX W]Ybhg fYdcfhYX cb h\Y 8U]m 6YX ]ghFYdcfh#hcHJ bi a VYf`cZXUng ]b h\Y fYdcfhdYf]cX"

## & Average Engagement Time (AET) (Days):

- Uk **DifdcgY**. 5 fYUgcbUV`mg\cfh59H]bX]WIHYg'h\YgngHYa llygi WW'gg']b fUd]X fY!\ci g]b[`Yb[U[Ya YbH'±nWIb'U`gc']bX]WIHYYZZ]W]YbWhfY`UHYX hc'hi fbcj Yf'cZVYXgz'k\]W\]g`YggYbH]U`hc'a YYhgngHYa XYa UbX Zcf'Ya Yf[YbWhg\Y`HYfg''
- VŁ **Dfc:YVMg**, FUd]X:FY!\cig]b[
- WŁ 8YZJb]hcb. H\Y Uj YfU[Y bi a VYf cZXUng h\Un\ci gY\c`Xg fYW]j Y g\Y`hYf gYfj ]W g Ug a YUgi fYX Zfca 'g\Y`hYf Ybhfmhc Ybhfm#Ybfc``a Ybh]bhc U fUd]X fY!\ci g]b[ 'dfc YVM' A YUgi fY Udd`]Yg cb`mhc \ci gY\c`Xg h\Uh\UX Ub YbhfmXUhY ]b U fUd]X fY!\ci g]b[ 'dfc YWhk ]h\]b h\Y fYdcfhdYf]cX"
- XL; cU!gYHjb[ a Yh\cXc`c[m6UgYX cb df]cf dYfZcfa UbW"
- YE **FYdcffjb[ a Yh\cXc`c[m** ffF< YbhfmXUhY i g\Y`hYfYbhfmXUhYE#'h\Y`bi a VYfcZhchU` X]ghjbVh\ci gY\c`Xg`gYfj YX`k]h\`Ub`YbhfmXUhY`]b`Ub`FF< dfc^YVhik]h\]b h\Y`fYdcfh dYf]cX''

## : M&\$&\$ Dfc[fUa 9jUi Uh]cb

## ' Ł Average Length of Participation (Days):

- UŁ **Di fdcgY**. 5 fYUgcbUV mg\cfh`Yb[h\cZdUfh]V]dUh]cb`]bX]VVIhYg'h\Uhih\Y'gnghYa']g' Ugg]gh]b['\ci gY\c`Xg'hc`UV\]Yj Y`]bXYdYbXYbW'k]h\ci h`cb[!hYfa'fY`]UbW'cb'h\Y'qnghYa'''
- VŁ GnghYa g. FUd]X FY!\ci g]b[ 'UbX <ca Y YggbYgg DfYj Ybh]cb
- VY 8YZ|b]h]cb. H\Y'Uj YfU[Y'bi a VYf`cZXUng h\UhYl]hYX'X]gh]bVYh\ci gY\c`Xg`fYWY]j YX'gYfj ]WgžUg`a YUgi fYX'Zfca 'h\Y'dc]bhcZYbhfmhc'h\Y'Yl]hXUhY'Zfca 'h\Y'gnghYa"
- XL; cU!gYhhb[ a Yh\cXc`c[mA YYhcf VY`ck 7G6 6cUfX 9bXg Dc`]\Mh
- YŁ **FYdcffjlo['a Yth.cXc'c[m**' ftl] jhXUhY'i '9blfn#9bfc'`a YbhXUhYŁ#'th.Y'bi a VYf'cZhchU'' XjghjbVli\ci gY\c'Xg'gYfj YX'UbX'YI jhYX'Zfca 'th.Y'gnghYa 'Xi fjlo['th.Y'fYdcfhdYf]cX"

## (Ł Average Length of (Shelter) Stay (LOS) (Days):"

- UŁ **Di fdcgY**. 5 fYUgcbUV mg\cfh@CG ]bX]\WhYg h\Y gnghYa Ñg gi \WYgg ]b fUd]X fY!\ci g]b[" #n\Wb U`gc ]bX]\WhY YZZ]\Nj\Yb\WhYY `UhYX hc hi fbcj Yf cZ\VYXgzk\]\W\ ]g YggYbh]U`hc a YYh qnghYa XYa UbX Zcf Ya Yf[ Yb\Whg\Y`hYf"
- VŁ **GnghYa g.** '9a Yf[YbWhG\Y`hYfžFUd]X'FY!\ci g]b[ž'UbX'9a Yf[YbWhG\Y`hYf'UbX' HfUbg]h]cbU`'<ci g]b['

## WŁ 8YZjbjhjcb."

- JŁ 9a Yf[YbWmG\Y`HYf'UbX'HfUbg]h]cbU`<ci g]b[.'H\Y'Uj YfU[Y'W'a i `Uhjj Y'bi a VYf'cZ XUmg'\ci gY\c`Xg'fYWf]j Y'g\Y`HYf'Ug'a YUgi fYX'Zfca 'g\Y`HYf'YbHfmhc'Yl]hicf``UghXUm cZfYdcfhdYf]cX"'''
- ]k Fud]XFY!\ci g]b[. H\Y Uj Yfu[Y bi a VYf cZXUng\ci gY\c`Xg fYW]j Y gYfj ]Wg Ug a YUgi fYX Zfca h\Y dc]bhcZYbhfm]b h\Y fUd]XfY!\ci g]b[ gnghYa hc h\Y Yl ]hXUhY Zfca h\Y Ya Yf[YbWng\Y hYf"A YUgi fY Udd`]Yg cb mhc \ci gY\c`Xg h\Uh\UX Ub YbhfmXUhY ]b h\Y fUd]XfY!\ci g]b[ gnghYa k ]h\]b h\Y fYdcfhdYf]cX" Note: households who had a rapid re-housing entry date after their emergency shelter exit date are excluded from this calculation.
- XŁ; **cU'!gYhi]b[ 'a Yh\cXc`c[m**'A YYhcf`VY`ck '7G6'6cUfX'9bXg'Dc`]Wh'5b'Uj YfU[Y'@CG' Ygg'h\Ub'9bXg'[cU']g'Wtbg]XYfYX'hc'VY'h\Y'XYg]fYX'X]fYW**l**]cb''

## YŁ FYdcfhjb[ a Yh\cXc`c[m"

- ]Ł 9a Yf[YbWmG\Y`hYf. f9l]hXUhY`cf`fYdcfhYbX`XUhY`l '9bhfmXUhY£#'h\Y`bi a VYf`cZ'hchU`X]gh]bWh\ci gY\c`Xg`gYfj YX`k]h\]b`h\Y`fYdcfhdYf]cX'''
- ]]Ł FUd]X'FY!\ci g]b[.' fG\Y'HYfYI]hXUHY'Ì 'FUd]X'fY!\ci g]b['YbHfmXUHYŁ#'h\Y'bi a VYf' cZhcHJ''X]gh]bVh'\ci gY\c'Xg'gYfj YX'k]h\ 'Ub'YbHfmXUHY']b'h\Y'fUd]X'fY!\ci g]b[' gnghYa 'k]h\]b'h\Y'fYdcfhdYf]cX''''

## ) Ł Average Monthly Household Income (\$):

UŁ **DifdcgY**. ≠x]/WhYg h\Y YWobca ]WghUhi g cZ\cigY\c`Xg gYfj YX Vmh\Y gnghYa 'UbX' g\ck g k \Yh\Yf h\Y gnghYa ']g hUf[Yh]b[ Ub 'Uddfcdf]UhY dcdi 'Uh]cb"



- VŁ **GnghYa g.** '9a Yf[YbWhG\Y`hYfž'9a Yf[YbWhG\Y`hYf'UbX'HfUbg]h]cbU`'<ci g]b[žFUd]X'FY! \ci g]b[**ž**<ca Y`Ygg'DfYj Ybh]cbžUbX'DYfa UbYbhGi ddcfh]j Y'<ci g]b[
- WŁ 8YZJb]Injcb. H\Y'Uj YfU[Y']bWta Y'Zfca 'U``]bWta Y'gci fWrg'Zcf'h\Y'\ci gY\c'X'UhignghYa 'YbIrn'i'
- XŁ; cU!gYth]b[ a Yt\cXc`c[mB#5"
- YŁ **FYdcff]b[ a Yth.cXc`c[ m** HcHJ` Ua ci bhcZU``]bWta Y gci fWg UhgnghYa YbffmflUhYgh YbffmZcf`\ci gY\c`Xg k ]th a i `t]d`Y gHUng Xi f]b[ fYdcfhdYf]cXŁ#th\Y bi a VYf cZhchJ`` X]gh]bWi\ci gY\c`Xg gYfj YX k ]th\]b th\Y fYdcfhdYf]cX" Note: Income entered by and clients served by Maryhaven-Safety are excluded from calculation.

## \*Ł Average Rapid re-housing Referral Time (Days):

- UŁ **Di fdcgY.** 5 fYUgcbUV mg\cfn5j YfU[YFF<FYZYffU H]a Y ]bX]WlhYg h\Y g\Y hYf qnghYa Ñi qi WVqg ]b ei ]W\_fYZYffU hc fUd]X fY!\ci q]b[ dfc[fUa q"
- VŁ **Dfc'YVMg**, G]b[ `Y 5Xi `hFUd]X FY!\ci g]b[ `
- VY 8YZJb]h]cb. HNY Uj YfU[Y bi a VYf cZXUng h\UniVV]Ybhg k U]hVYZcfY fYVV]j ]b[ 'U'fUd]X fY! \ci g]b[ 'fYZYffU'ža YUgi fYX Zfca 'g\Y'hYf Ybhfmhc fYZYffU'XUhY'''
- XŁ; cu'!gYHjb[ a Yh\cXc'c[m'6UgYX'cb'df]cf'dYfZcfa UbW"
- YE **FYdcffjlb['a Yth.cXc`c[m**' ffF<'Dcc`'9blfm8UthY'] 'G\Y'thYf'9blfm8UthYE#'th\Y'bi a VYf'cZ' hctU''X]gh]bWti\ci gY\c`Xg'k]th\'Ub'FF<'Dcc`'9blfm8UthY'k]th\]b'th\Y'fYdcftidYf]cX'''

## +Ł Average Rapid Re-housing Wait Time:

- UŁ **Di fdcgY**. 5 fYUgcbUV`Y`k U]hihja Y`]bX]WUhYgʻh\Y`gnghYa Ñgʻgi WWYggʻ]b`fUd]X`fY!\ci g]b[`i fbcj Yf"
- VŁ GnghYa g. G]b[ Y 5Xi `hFUd]X FY!\ci g]b[
- VY 8YZb]hcb. H\Y'Uj YfU[Y'bi a VYf'cZXUng'U'df]cf]hjnYX'W]Ybh']g']b'h\Y'FF<'dcc``VYZcfY' ]bhU\_Y']bhc'h\Y'g]b[`Y'UXi `hfUd]X'fY!\ci g]b['dfc[fUa"</p>
- XL; cU:lgYHi]b[ a Yh\cXc\c[m:6UgYX\cb\df]cf\dYfZcfa UbW"
- YE FYdcffjb['a Yth.cXc`c[m ffF<'9blfm8UthY'] FF<'Dcc`'9blfm8UthYE#th.Y'bi a VYf'cZ hctu''X]grjbVtiW]Ybtg'gYfj YX'k]th. 'Ub'YblfmXUthY']b'th.Y'g]b['Y'UXi 'hFF<'dfc'YVtik]th.Y'fYdcffndYf]cX'''

#### , Ł Carryover Households (#):

- UŁ **Di fdcgY**. '≢x]\WhYg'h\Y'j c`i a Y'cZ\ci gY\c`Xg'gYfj YX'Vmh\Y'gnghYa 'k\]\W 'Xc'bchYl]h' df]cf'hc'h\Y'Z[fghXUmcZh\Y'fYdcfhdYf]cX"'H\]g'a YUgi fY']g'a cb]hcfYX'Vi h'bch' Yj U'i UhYX"'
- VŁ GnghYa g. FUd]X FY!\ci g]b[ ž<ca Y`YggbYgg DfYj Ybh]cb`
- VY. 8YZIb]hicb. 8]ghibWri\ci gY\c`Xg'h\UhYbhYfYX'h\Y'gnghYa 'df]cf'hc'h\Y'ZifghiXUmcZh\Y' fYdcfhidYf]cX"A cb]hcfYX'Vi h'bchYj U'i UhYX"
- XŁ; cu'!gYhijb[ a Yh\cXc`c[m'6UgYX cb df]cf dYfZcfa UbW''''
- YŁ **FYdcff]b[ 'a Yt\cXc'c[m**'H\Y'bi a VYf'cZX]gt]bVt/\ci gY\c`Xg'k]t\ 'Ub YblfmXUtY VYZcfY' +#%#LL Zcf'Ubbi U'bi a VYf/VYZcfY' +#%#LL UbX'%#%#LL Zcf'gYa]!Ubbi U'VYZcfY'

# : M&\$&\$ Dfc[fUa 9j Ui Uhjcb

+#%#LLz\%\$#\#LLz\W#\#LLz\UbX\(#\#\L\Zcf\ei\Ufh\f\n\UbX\bc\Wtff\gdcbX]b[\YI]h\XUh\'\V\Zcf\h\Y\ghUfhcZh\Y\f\qcfh]b[\d\f]cX\"

## - Ł Employment Status at Entry (%)

- UŁ **Di fdcgY**. ±bX]/WIhYg'th.Y'dYfW/bhcZ\ci gY\c`Xg'Ya d`cn<del>Y</del>X'Uhth.Y'th]a Y'cZ'gngthYa 'Ybtfm'i'''
- VŁ **Dfc[fUa g.** '9a Yf[YbWhG\Y`hYfžDYfa UbYbhGi ddcfhjjY'<ci gjb[žDfYj YbhjcbžFUd]X'FY! \ci gjb[žUbX'HfUbg]hjcbU'<ci gjb[
- W. **8YZJb]Injcb.** Hv.Y. dYfWybhcZ\ci gY\c`Xg`h\Un\Uj Y`Ya d`cna YbhUn'Ybhfm'Ug`]bX]\Wbx`Vm hv.Y]f`fYdcfhYX`YUfbYX`]bWa Y`Un'Ybhfm]bhc`hv.Y.gnghYa "
- Xt; cU!gYhjb[ a Yh\cXc`c[mB#5]
- YŁ FYdcffjb[ a YhkcXc`c[m:7U'W`UhYX'VmXYhYfa ]b]b[ hkYbi a VYfcZi b]ei Y \ci gY\c`Xg'h\Uh\Uj YÎYUfbYX']bWta Yi Zfca 'Ya d`cma YbhUg'U'gci fW'cZ]bWta Y'Uh gnghYa YbhfmfUbma Ya VYfcZhkY\ci gY\c`XtžUbX'X]j ]X]b[ hk]g'bi a VYf'VmhkYhchU' bi a VYfcZi b]ei Y`\ci gY\c`Xg'h\UhkYfY'gYfj YX'Xi f]b[ hkYfYdcfhdYf]cX"'Note:

  Earned income entered by and clients served by Maryhaven-Safety are excluded from this calculation.

## %\$\text{Exit to Homelessness (%):"

- Uk DifdcgY. \*ex]/WhYg'h,Y'gnghYa Ñg'gi WWYgg']b'YbX]b['\ca Y`YggbYgg'Ug'a YUgi fYX'Vmh\cgY'k \c'fYhi fb'hc'Ya Yf[YbWhg\Y'hYf'cf'h,Y'ghfYYhg'''5''ck Yf'fUhY']g'Wcbg]XYfYX'dcg]hjj Y'''
- VŁ Gnatya a. Dyfa UbybhGi ddcfhij y <ci qib[ "
- VY 8YZID]Injcb. HvY dYfWYbhcZ\ci gY\c`Xg`k\c`Xc`bcha U]bHJ]b hvY]f`\ci g]b[ 'UbX`fYhi fb' hc Ya Yf[ YbWng\Y`hYf`cf`hvYghfYhg`k]hv]b'% \$ XUngicZYI ]hZfca 'hvYgnghYa "```
- XL; cU!gYH]b[ a Yh\cXc`c[m:5hcf:VY`ck:7G6:6cUfX:9bXg:Dc`]Wh:
- YŁ FYdcffjlo[ a Yh.cXc`c[miH.Y bi a VYfcZ\ci gY\c`Xg`k\c`Yl]hih.Y gnghYa 'UbX'YbhYf' g\Y`hYfcfghfYYhci hfYUW. k]h.]b'% \$ XUng UZhYfYl]hcf'UgcZXUhY cZfYdcfhžX]j ]XYX Vmh.Y hchU`bi a VYfcZX]gh]bVhi\ci gY\c`Xg`gYfj YX`Xi f]b[ 'h.Y`fYdcfn]b[ 'dYf]cX. fkci gY\c`Xg`h\UhYl]hYX gnghYa 'UbX'YbhYfYX`g\Y`hYfcfghfYYhci hfYUW. k]h.]b'% \$ XUngŁ#hchU`X]gh]bVhi\ci gY\c`Xg`gYfj YX'''
  - lk Bia YfUhcf
    - %E i UfhYfmWe\cfh 7UVV UhY h\Y bi a VYfcZX]gh]bWi\ci gY\c`Xg'h\UhYI ]h\X' k ]h\]b'h\Y'ei UfhYfmfYdcfhdYf]cX'hk c'ei UfhYfg'df]cf'UbX'YbhYfYX'g\Y'hYf'cf' ghfYhci hfYUW\ k ]h\]b'% \$ XUng'UZhYf'YI ]hcf'Ug'cZXUhY cZfYdcfh'
    - &L GYa ]!Ubbi U`Wc\cfh`7U'Vi`UhY`h\Y`bi a VYf`cZX]gh]bWr\ci gY\c`Xg`h\Uh YI ]hYX'k ]h\]b`h\Y`df]cf`gYa ]!Ubbi U`fYdcfhdYf]cX`UbX`YbhYfYX`g\Y`hYf`cf` ghfYYhci hYUW\k]h\]b`% \$ XUng`UZhYf`YI ]hcf`Ug`cZXUhY`cZfYdcfh'
    - ' Ł 5bbi U`Wt\cfh`7UW'\UhY'h\Y'bi a VYf`cZX]gh]bWh\ci gY\c`Xg'h\UhYI]hYX' k ]h\]b'h\Y'Z]fgh'% \$'XUng'cZh\Y'Ubbi U`fYdcfhdYf]cX'UbX'YbhYfYX'g\Y'hYf`cf' ghfYYhci hYUW\k]h\]b'% \$'XUng'UZhYf'YI]hcf'Ug'cZXUhY'cZfYdcfh''

## ]]Ł 8Ybca ]bUhcf

% Ei UfhYfmWe\cfh 7U'W/`UhY h\Y'bi a VYf'cZX]gh]bWh\ci gY\c`Xg'gYfj YX' k]h\]b h\Y ei UfhYfmfYdcfhdYf]cX'hk c'ei UfhYfg'df]cf"



- &Ł GYa ]!Ubbi U`Wt\cfh.7U'W\`UhY'h\Y'bi a VYf`cZX]gh]bWt\ci gY\c`Xg`gYfj YX` k ]h\]b`h\Y'df]cf`gYa ]!Ubbi U`fYdcfhdYf]cX"
- ' Ł 5bbi U`Wt\cfh.7UW\`UhYh\Ybi a VYfcZX]gh]bWt\ci gY\c`Xg`gYfj YX`k]h\]b` h\Y`Z]fgh% \$`XUng`cZh\Y`Ubbi U`fYdcfhdYf]cX''

#### %\Lexited Households (#):

- UŁ **DifdcgY.** ⊕X]/WhYg h\Y j c`i a Y cZ\ci gY\c`Xg gYfj YX Vmh\Y gnghYa 'k\]/W YI]hXi f]b['h\Y fYdcfhdYf]cX" H\]g a YUqi fY ]g a cb]hcfYXžVi hbchYj U'i UhYX"
- VŁ **GnghYa g.** '9a Yf[YbWhG\Y`hYfžFUd]X`FY!\ci g]b[ž<ca Y`YggbYgg`DfYj Ybh]cbž'UbX` HfUbg]h]cbU``<ci g]b[`
- VY 8YZJb]h]cb. H\Y'bi a VYf'cZX]gh]bVh'\ci gY\c`Xg'h\Uh'YI]hYX'h\Y'gnghYa 'Xi f]b['h\Y' fYdcfhdYf]cX''A cb]hcfYX'Vi h'bch'Yj U'i UhYX''
- XL; cU!gYhhb[ a Yh\cXc`c[mA YYhcfYl WYX df]cf dYfZcfa UbW"...
- YŁ **FYdcfhjlo[ 'a Yth.cXc`c[ m**;H\Y'bi a VYf`cZX]ghjloVh'\ci gY\c`Xg`k ]h\ 'Ub'Yl ]hXUhY k ]h\]b` h\Y`fYdcfhdYf]cX`h\UhUfY`U`gc`bchVl/ffYbhmjlo`h\Y`gnghYa `Uhh\Y`YbX`cZh\Y`fYdcfh dYf]cX''`

#### %&LHouseholds Served (#):

- UŁ **Di fdcgY.** ±5X]VWhYg\*h\Yjc`i a Y`cZ\ci gY\c`Xg`gYfj YX`Vmh\Y`gnghYa "```
- VŁ GnghYa g. 5"
- VY 8YZID]h]cb. H\Y'bi a VYf'cZX]gh]bVh\ci gY\c`Xg'gYfj YX'Vmh\Y'gnghYa 'f]bWi X]b['bYk' UbX'VVIffncj YfŁXi f]b['h\Y'fYdcfhdYf]cX"'
- XŁ; cU!gYhjb[ a Yh\cXc`c[mA YYhcfYl WYX df]cf dYfZcfa UbW"...
  - ]k FUd]X'FY!\ci g]b[ 'UbX'<ca Y'YggbYgg'DfYj Ybh]cb.'
    - fl/£ 5bbi U`dfc^YVl/jcbg. VUgYX`cb`\]ghcf]VVJ`hfYbXg`UbX#cf`Ubh]Vl/dUhYX`dYfZcfa UbVl/"``
      - fUL 7Uffncj Yf`\ci gY\c`Xg`UfY`h\cgY`Ybfc``YX`df]cf`hc`+#%#LL`UbX`Ubh]V]klUhYX`hc`VY`UVh]j Y`]b`h\Y`gnghYa`Ug`cZ+#%#LL''
      - fVŁBYk 'gnghYa 'YbhfUbhg'UfY'h\cgY\cigY\c`Xg'Ybfc``YX'cb'cf'UZhYf'+#%#LL"''
      - fWL HchU^\ci gY\c`Xg'UfY'h\Y'gi a 'cZVWffncj Yf'd'i g'bYk 'gnghYa 'YbhfUbhg''
    - f&LGYa]!Ubbi U`UbX'ei UfhYfmdfcYVMjcbg"
      - fluk 7Uffnæj Yf`\ci gY\c`Xg`UfY'h\cgY`Ubh]V]dUhYX'hc`VY`UVh]j Y`]b`h\Y`gnghYa`Ug`cZYbX`cZfYdcfhdYf]cX"``: cf`fUd]X`fY!\ci g]b[žh\]g`g\ci `X`VY`gYUgcbU``m`UX^;ghYX"`
      - fVŁ BYk 'gnghYa 'YbhfUbhg'UfY'h\cgY'\ci gY\c`Xg'Ybfc``YX'UZhYf'ghUfhcZfYdcfh' dYf]cX": cf'fUd]X'fY!\ci g]b[žh\]g'g\ci `X'VY'gYUgcbU`mUX^ ghYX"
      - fWL HchU^\cigY\c`Xg'UfY'h\Y'gia 'cZVWffncjYf'd'ig'bYk 'gnghYa 'YbhfUbhg''
  - ]]Ł 9a Yf[YbWhG\Y`HYf'UbX'HfUbg]h]cbU`<ci g]b[
    - fl/k 5bbi U`dfc^YVMjcbg.'VUgYX'cb`\]ghcf]VVJ`HYbXg'UbX#cf'UbHjVMdUHYX' dYfZcfa UbW'''''
      - $\hbox{flull I gY'df]cf'mYUf'lfYbX'XUlfU'lfc'XYlfYfa ]bY'Uj'YfU[Y'Ubbi U'`XYa UbX''' ] }$

# : M&\$&\$ Dfc[fUa 9; Ui Uhcb

- fVŁ ZXYa UbX']g'fY`Uhjj Y`mgrUV`YždfYX]Whh\Y'gUa Y'Ubbi U``XYa UbX'bi a VYf` Zcf'h\Y'VVffYbhZjqVV`nYUf''
- fWL ZXYa UbX'ffYbX'g\ckg'U'ghYUXm]bWfYUgY'cf'U'ghYUXmXYWfYUgYždfYX]Wfh\Y' W/ffYbhZ]gWU'mYUf'XYa UbX'VUgYX'cb'Uj YfU[Y'Ubbi U'fUhY'cZW\Ub[Y''
- f&LGYa]!Ubbi U`UbX`ei UfhYf`mdfc^YVMjcbg.`VUgYX`cb`Ubbi U`dfc^YVMjcbg`UbX`UX^1 ghYX`Zcf`Xi d`]WUhjcb`fWUffncj Yfg`UbX`fYVJX]j ]ghgL'''.7Uffncj Yf]g`VUgYX`cb`\]ghcf]WU`gnghYa`hfYbXg''.5X^1 ghZcf`gYUgcbU`]hm]ZUddfcdf]UhY''
- ]]]Ł DYfa UbYbhGi ddcfhjj Y <ci g]b[...
  - fl/k 5bbi U`dfc^YVMjcb. Ai`hjd`mh\Y`gnghYa`WUdUVJmmVmh\Y`dfc^YVMYX`Ubbi U`hi fbcj Yf`fUhY"': =b`a cghVWgYgžh\]g`dYfVMbhU[Y`k]``VY`&\$i "': cf`YI Ua d`Yž]Z gnghYa`VWdUVJmmjg`&\$žh\Yb`Ubbi U`dfc^YVMYX`\ci gY\c`Xg`gYfj YX`k ci `X`VY`&(`f&\$1`%'&1`&('L''
  - f&LGYa]!Ubbi U`dfc^YVMjcb. Ai`hjd`mh\Y`gnghYa`VVdUVJmnVmh\Y`dfc^YVMYX`gYa]! Ubbi U`hi fbcj Yf`fUhY""±b`a cghVVgYgžh\]g`dYfVVbHU[Y`k]``VY`%\$i "'`: cf` YI Ua d`Yž]ZgnghYa`VVdUVJmnjg`&\$žh\Yb`gYa]!Ubbi U`dfc^YVMYX`\ci gY\c`Xg` gYfj YX`k ci `X`VY`&&`f&\$1`%%1`&&L"
  - flłEi UfhYfmdfcYVMjcb. Ai`hjd`mh\Y`gnghYa `VVdUVJmiVmh\Y`dfcYVMYX`ei UfhYfm hi fbcj YffUhY"" = b`a cghVVgYgžh\]g`dYfVVbHJ[Y`k]``VY`) ı "'': cfYl Ua d`Yž]Z gnghYa `VVdUVJmi]g`&\$žh\Yb`ei UfhYfmdfcYVMYX`\ci gY\c`Xg`gYfj YX`k ci `X`VY` &%f&\$1`%"\$) 1`&%2""
- YŁ **FYdcff]b[ a Yh.cXc`c[ m**:H.Y bi a VYf`cZX]gh]bVti\ci gY\c`Xg`gYfj YX Vmh\Y`gnghYa Xi f]b[ h\Y`fYdcfhdYf]cX"8]gh]bVti\ci gY\c`Xg`gYfj YX`UfY`]XYbh]Z]YX`Vmh\Y]f``Ugh gYfj ]W fYVtfX Zcf'h\Y`gnghYa YbhYfYX`]bhc`7GD`Ug`cZh\Y`YbX`cZh\Y`fYdcfhdYf]cX"'`

### % LHousing Affordability at Exit (%):

- UŁ **Di fdcgY**. ±x]/Wihyg h\ Unih\ y gnghya ']g Ugg]gh]b[ \ci gY\c`Xg`hc cVhU]b gi ZZ]/V]Ybh |bWta Y`hc UhhU]b UbX a U]bHU]b \ci g]b[""5\][\YffUhY ]g Wtbg]XYfYX dcg]h]j Y"
- VŁ Gradya a Fud]X FY!\ci a]b[žDYfa UbYbhGi ddcfh]j Y <ci a]b[žUbX DfYj Ybh]cb"
- VY 8YZJb]Hjcb. H\Y dYfWYbHU[Y cZX]gHjbVYi\ci gY\c`Xg H\UhYI]HYX H\Y gngHYa gi WWYggZi ``m Xi f]b[ H\Y fYdcfhdYf]cX k]H\ U\ci g]b[ WeghH\UhXcYgbNiYI WYYX ) \$1 cZH\Y ]bWea Y"
- XŁ; cu'!gYhijb['a Yh\cxc'c[m'A YYhcf'Yl WYX'7G6'6cUfX'9bXg'Dc']Wh'A cb]hcfYX'Vi hibchi Yj U'i UhYX'''
- YŁ FYdcfhjb[ a Yh\cXc`c[m"

GhYd'% '8YhYfa ]bY'h\Y'bi a VYf'cZ\ci gY\c`Xg'h\Uh'Yl ]hYX'h\Y'gnghYa 'k]h\'U' gi WWggZi ``\ci g]b['ci hWta Y'Xi f]b['h\Y'fYdcfh]b['dYf]cX'''

GhYd'&: cfYUW\`\ci gY\c`XžVVVVV`UhYh\Y'dYfWYbhcZ\ci gY\c`X`]bWta Y`gdYbhcb`\ci g]b[`fUbX'i hj`]hjYgž]ZfY`Yj UbhŁVmX]j ]X]b[`h\Y`\ci gY\c`XMj\VtghcZfYbhfUbX'i hj`]hjYg`ZcfFUd]X`FY!\ci g]b[`UbX`DfYj YbhjcbŁUhYl]hk]h\`h\Y`\ci gY\c`XMj\]bWta Y`UhYl]h'``

GhYd" ...7ci bhth\Y'bi a VYf'cZ\ci gY\c`Xg'h\UhgdYbX') \$1 'cf``Ygg'cZh\Y]f']bWta Y'cb'\ci g]b['UbX'i h]`]h]Yg"

GhYd ( . '8]j ]XY h\Y bi a VYf ]b GhYd ' Vmh\Y bi a VYf cZgi VM ggZi `\ci g]b[ Yl ]hg ]b GhYd '' Note: Households with successful housing outcome that are missing the income and cost of rent are excluded from calculation.



# % ŁHousing Stability (Months):

- UŁ **Di fdcgY**. ≠x]/WhYg h\Y gnghYa Ñg gi WWgg ]b YbX]b[ `\ca Y`YggbYgg Ug a YUgi fYX`Vm `Yb[h\ cZh]a Y`h\UngnghYa 'dUfh]WJdUbhg fYhU]b dYfa UbYbhgi ddcfh]j Y `\ci g]b[ cf` hfUbg]h]cbU``\ci g]b[ "5``cb[YffUhY`]g [YbYfU``mWtbg]XYfYX`dcg]h]j Y Zcf`dYfa UbYbh gi ddcfh]j Y`\ci g]b[ "
- VŁ GnghYa q. DYfa UbYbhGi ddcfhij Y < ci gib[ "
- VY 8YZID]Hjcb. H\Y'Uj YfU[Y``Yb[h\`cZh]a Yža YUgi fYX`]b`a cbh\gžh\UhX]gh]bVh\ci gY\c`Xg` fYg]XY`]b'h\Y'DYfa UbYbhGi ddcfh]j Y'<ci g]b['i b]hZfca 'Ybhfmhc'Yl]hcf'YbX'cZfYdcfh dYflcX''`</p>
- XL; cuigyhijb[ a Yh\cxc`c[m:A YYhcf:YI WYX:7G6:6cUfX:9bXg:Dc`]Wh::
- YŁ **FYdcffjb[ a Yh\cXc`c[m**:A YUgi fYX'i g]b[ h\Y'Uj YfU[Y'\ci gY\c`X``Yb[h\ cZgHUm]b` XUngifZfca Yblfmhc'Yl]hXUhY'cf'YbX'cZfYdcfhdYf]cXz]Zgh]``'U'fYg]XYbHzX]j ]XYX'Vmh\Y' Uj YfU[Y'XUngidYf'a cbh\ fl \$") XUngiL'''

GHYd'% '7U'W'`UHY H\Y'hcHU``XUng'H\UHYUW\`\ci gY\c`X'k Ug'\ci gYX'Vmgi VHfUWIJb['H\Y' 9bHm8UHY'IIca 'H\Y'9l]H8UHY'cf'YbX'cZfYdcfhdYf]cX'Icf'U``fYWtfXg'''

GhYd'& 8YhYfa]bY'h\Y'UjYfU[Y``Yb[h\cZghUmZcf'U``h\Y`\cigY\c`Xg'VmX]j]X]b['h\Y' qi a 'cZhchU``XUng'\cigYX'Vmh\Y'bi a VYf'cZX]qh]bVh\\cigY\c`Xg'gYfjYX''

GhYd". 8]j]XY'h\Y'UjYfU[Y``Yb[h\`cZghUmVm" \$")žk\]W\`]g'h\Y`UjYfU[Y`biaVYf`cZ`XUngi]b`U'acbh\"

# % Uncrease in income from employment, from entry to exit or end of reporting period (%):

- UŁ **Di fdcgY.** DX]WUNYg N Unh Y gnghya ]g Ugg]gh]b[ \ci gY\c`Xg nc cVhJ]b Ya d`cna Ybh ]b Wa Y" 5\][ \Yf fUn Y ]g Wabg]XYfYX dcg]h]j Y"
- VŁ **GnghYa g.** DYfa UbYbhGi ddcfhjj Y <ci gjb[
- VY 8YZIb]Injcb. HAY dYfWbHU[Y cZUXi hg hAUh]bWfYUgY ]bWta Y Zfca 'Ya d`cna YbhZfca 'Ybhfmhc Yl]hcf'UhhAY YbX cZfYdcfh]b[ 'dYf]cX ]ZbchYl]hYX'''
- $\hbox{X$\&$; $\it cU'!gYH']b[$'a Yh\cXc\c[m'A YYhcf'Y]$ $\it WYX``cVU``7c7'gHUbXUfXg''' }$

# % Lincrease in cash income, other than employment, from entry to exit or end of reporting period (%): ``

- UŁ **DifdcgY**. ±x]/WihYgʻh\Unin\YʻgnghYaʻ]gʻUgg]gh]b[`\cigY\c`Xgʻhc`cVhU]bʻbcb!Yad`cna Ybh`]bV&aY"·5\][\YfʻfUhY`]gʻW&bg]XYfYX`dcg]h]jY"
- VŁ **GnghYa g.** DYfa UbYbhGi ddcfhjj Y <ci gjb[
- WE 8YZID]Injcb. HAY dYfWIbHU[Y cZUXi `hg h\Un']bWfYUgY ]bWta Y Zfca 'gci fWfg ch\Yf h\Ub' Ya d`cna YbhZfca 'Ybhfmhc Yl ]hcf Unih\Y YbX cZfYdcfh]b[ 'dYf]cX ]ZbchYl ]hYX"

- XE; cU!gYh]b[ a Yh\cXc`c[mA YYhcfYl WYX 7c7 `cWl`ghUbXUfXg"
- YŁ FYdcffjb[ a YhkcXc`c[mi-hkY bi a VYfcZUXi `hg gYfj YX Xi f]b[ 'hkY fYdcfhdYf]cX k k c kUX Ub ]bWfYUgY ]b 'hkY]f hchU ]bWfa Y Ua ci bhZfca Ybhfmhc Yl ]hftcf UhihkY YbX cZ fYdcffjb[ dYf]cXž]ZbchYl ]hYX Zfca 'hkY gnghYa ŁžYl Wi X]b[ 'Ya d`cma Ybh]bWta Yž X]j ]XYX VmhkY hchU bi a VYfcZUXi `hg gYfj YX Xi f]b[ 'hkY fYdcfhdYf]cX" ±bWta Y gci fWg Yl Wi XY Ya d`cma YbhžVi ha Um]bWi XY Wlg\ VYbYZ]hg UbX#cf chkYf gci fWg" Note:

  Deceased households are not included in the count of households served.

## %+ŁLong-Term (Two-Year) Recidivism (%):

- UŁ **Di fdcgY**. ±bX]/WhYg h\Y gnghYa Ñg gi WWgg ]b YbX]b[ '\ca Y`YggbYgg Ug a YUgi fYX`Vm h\Y bi a VYf cZ\ci gY\c`Xg k\c UhtU]b \ci g]b[ 'UbX`Xc bchfYhi fb hc \ca Y`YggbYgg gi VgYei Ybhhc U gi WWggZi ``\ci g]b[ ci hWta Y"5`ck Yf fUhY`]g Wtbg]XYfYX`dcg]h]j Y"
- VŁ **Dfc[fUa g.** 5``YI WdhDYfa UbYbhGi ddcfhjj Y <ci gjb[ 'UbX HfUbg]hjcbU` <ci gjb[
- W. 8YZIb]InJcb. H.Y hohu bi a VYf cZX]gh]bWti\ci gY\c`Xg h\Unk YfY Yl]InYX hk c mYUfg df]cf hc h\Y fYdcfn]b[ 'dYf]cX k]h\ 'U'gi \WYggZi ``\ci g]b[ 'ci hWta Y fUg XYZ]bYX Zcf h\UngnghYa Ł UbX fYhi fb hc g\Y'hYf cf ghfYYhci hfYUW\ k]h\]b hk c mYUfg 'UZhYf Yl]InJb[ 'h\Y gnghYa "'' H\]g a YUgi fY ]g Yl dfYggYX 'Ug 'U'dYfW'bhU[ Y cZhchu 'X]gh]bWti\ci gY\c`Xg k]h\ 'Ub Yl]h hc dYfa UbYbh\ci g]b[ 'fUg XYZ]bYX Zcf 'h\UngnghYa Łhk c mYUfg df]cf hc 'h\Y fYdcfh]b[ 'dYf]cX"''
- XŁ; cU!gYH]b['a Yh\cXc`c[m'A YYhcf'VY`ck 'df]cf'dYfZcfa UbW'"A cb]hcfYX'Vi hbch' Yj U'i UhYX''
- YŁ **FYdcft]b['a Yth.cXc`c[m**:'5'dYfW'btU[Y'fUth'fYZYWt]b['th.Y'bi a VYf'cZfYV]X]j ]ghi \ci gY\c`Xg']b'U'gngthYa 'fY`Ut]j Y'thc'th.Y'bi a VYf'cZ\ci gY\c`Xg'th.Un'YI]th'X'th.Y'gngthYa k]th.'U'gi WW'ggZi``\ci g]b['ci thWta Y'ftgdYV]Z]Wthc'th.UtigngthYa Ł'''7U'W'`UthYX'cb`m'Zcf' Ubbi U`'fYdcft]b['dYf]cXg'''
  - ]Ł FUHY 1 fibi a YfUhcf#XYbca ]bUhcfŁi 1%\$\$
  - ]k 8Ybca ]bUhcf. "7c\cfhicZ\ci gY\c`Xg'k\]W\"UhtU]bYX'U'gi WWggZi``\ci g]b[' ci hWta Y""
    - f%2 7U'W'UhY h\Y'bi a VYf'cZX]gh]bVh\ci gY\c`Xg'k]h\'U'gi WVyggZ\``\ci g]b[`ci hWa Y'+'\$'hc'%\$-)'f\+'%hc'%\$-\*'Zcf'U`YUd'mYUf\:XUng'df]cf'hc'h\Y'YbX'cZh\Y'W'ffYbhfYdcfhdYf]cX'''
  - ]]]Ł Bi a YfUhcf. Bi a VYf cZfYVJX]j ]ghg Zfca h\Y UVcj Y Wt\cfh
    - fl/L 5 fYVIJX]j ]gh\ci gY\c`X`]g`XYZJbYX`Ug`U`X]gh]bVhi\ci gY\c`X`h\Uh`YI ]hg`U`gnghYa k ]h\`U`gi WWYggZi``ci hVda Y`fbdYVIJZJWhc`h\Uh`gnghYa L`UbX`YbhYfg`h\Y`Ya Yf[YbWhi g\Y`hYf`cf`ghfYYhci hfYUVI\`gnghYa g`k]h\]b`+'\$f\+'%Zcf`U``YUd`mYUfL`XUng`UZhYf`YI]hZfca h\Y`gnghYa"``

#### % ŁMovement (%):

- UŁ **Di fdcgY**. "±0X]/WhYg'h\Y'YI hYbhhc'k \]W\Ya Yf[YbWhg\Y'hYf'W]Ybhg'UfY'a ][fUh]b['Zfca' cbY'g\Y'hYf'hc'Ubch\Yf"5"ck Yf'fUhY']g'Wbg]XYfYX'dcq]hj Y"
- VŁ GnghYag: Ua] mUbX:G]b['Y:5Xi 'hi9aYf[YbWhG\Y'hYf:GnghYag'
- WŁ **8YZJb]hjcb.** '5``X]gh]bWn\ci gY\c`Xg'h\UhYl]hU'g]b[`Y'UXi `hcf'ZUa]`mYa Yf[YbWng\Y`hYf'Xi f]b['h\Y'fYdcfhdYf]cX'UbX'h\Yb'\Uj Y'WbHUWnk]h\'Ubch\Yf'q\Y'hYf'k]h\]b'gYj Yb'



XUngrcZYI]h"H\Y'a cj Ya YbhfUhY']g'a YUgi fYX'VmX]j]X]b['h\Y'hchU'X]gh]bVhi\ci gY\c`Xg'h\Uh'YI dYf]YbW'a cj Ya Ybh'Vmh\Y'hchU'X]gh]bWh\ci gY\c`X'YI]hg'Xi f]b['h\Y'Yj U'i Uh]cb'dYf]cX'ffY`Uh]j Y'hc'h\Y'gnghYa 'h\UhqYfj YX'h\Ya Ł"A cb]hcfYX'Vi h'bch'Yj U'i UhYX'''

- XŁ; culgythjb[ a yth.cxc.c[m5hcf.VY.ck 7G6.6cufx.9bxg.Dc]]Wh
- YŁ FYdcffjb[ a YthcXc`c[miH\Y bi a VYf`cZhchU`X]gh]bWf\ci gY\c`Xg'h\UhYl dYf]YbW a cj Ya Ybhk ]h\]b + XUng#h\Y bi a VYf`cZhchU`X]gh]bWf\ci gY\c`X Yl ]hg Xi f]b[ 'h\Y' fYdcfhdYf]cX" Note: Measure excludes exits from Maryhaven-Safety, YMCA First Time Homeless Shelter, Overflow, and Overnight shelters and exits to Maryhaven-Safety from Single Adult shelters).

# % LNegative Reason for Leaving (%):

- UŁ **Di fdcgY**. '5``ck 'fUhY cZbY[Uh]j Y 'fYUgcbg']bX]VWhYg'h\Y 'gnghYa Ñg'gi WWYgg']b 'ghUV]`]n]b[ 'U\ci gY\c`X']b \ci g]b[ "''
- VŁ GnghYa g. DYfa UbYbhGi ddcfhjj Y < ci gjb[ "
- WŁ 8YZJb]hcb. H\Y'dYfWbHJ[Y'cZ\ci gY\c`Xg'h\Uh`YUj Y'\ci g]b['Xi Y'hc'bcb!Wta d`]UbW' cf'X]gU[fYYa Ybhk]h\'h\Y'\ci g]b['fi 'Yg"
- XŁ; cu'!gYhilb[ a Yh\cxc'c[mA YYhcf VY'ck "cVu' 7c7 ghubxufxg"
- YŁ FYdcffjb[ a Yth.cXc`c[mH\Y bi a VYfcZYI]hYX\ci gY\c`Xg Xi f]b[ h\Y fYdcfhdYf]cX k\c\Uj Y Î bcb!Wta d`]UbW k ]h\ dfcYWi cf Î X]gU[fYYa Ybhk]h\ fi `Yg#dYfgcbi Ug'h\Y]f FYUgcb Zcf@YUj ]b[ h\Y gnghYa X]j ]XYX Vmh\Y hchU bi a VYfcZ\ci gY\c`Xg'h\UhYI]hYX Xi f]b[ h\Y fYdcfhdYf]cX" Note: Deceased households are not included in the count of households exited.

#### &\$\text{New Households Served (#):}

- UŁ **DifdcgY**. ±0X]/WhYgih\Yjc`i a YcZbYk \cigY\c`XgigYfjYX`Vmh\YignghYažk\]Wki]g` Woog]XYfYX'hc'a YUgifYignghYa YZZ]W]YbWh'i
- VŁ GnghYa g. FUd]X FY!\ci g]b[ 'UbX' < ca Y`YggbYgg 'DfYj Ybh]cb'
- W. **8YZ|b]h]cb.** Bi a VYfcZX]gh]bWh\ci gY\c`Xg'h\UhYbhYfYX'h\Y`gnghYa 'Xi f]b['h\Y`fYdcfh' dYf]cX'h\Uhk YfY'bchfYW]j ]b['gYfj]Wg'cb'h\Y``UghXUmcZh\Y'df]cf'fYdcfhdYf]cX''
- XŁ; cU!gYlhjb[ a Yh\cXc`c[mA YYhcfYl WYX df]cf'dYfZcfa UbW"
- YŁ **FYdcffjlo[ a Yth.cXc`c[ m**:H\Y bi a VYf`cZX]gtjloWt\ci gY\c`Xg`k ]th. 'Ub`YbtfmXUtY th.Un cWt/fg`VYtk YYb th.Y`gtUfnUbX`YbX`XUtYg`cZth.Y`fYdcftndYf]cX`UbX`th.Unk YfY`bchU`gc`]b`th.Y`dfc`YVthUg`cZth.Y`gtUfnXUtY`cZth.Y`fYdcftjlo[ 'dYf]cX'''

#### &%LNewly Homeless f] UbX i Ł

- UŁ **Di fdcgY**. '€X]WIHYg'H\Y'j c`i a Y'cZbYk `m'\ca Y`Ygg'\ci gY\c`Xg'gYfj YX'VmYa Yf[ YbWh g\Y`HYfg"''
- VŁ GnghYa g. 9a Yf[YbWhG\Y`hYf
- VY 8YZJb]hcb. H\Y'bi a VYf'cZX]gh]bVh\ci gY\c`Xg'h\UhYbhYfYX'Ya Yf[YbWng\Y`hYf'Xi f]b['h\Y'fYdcfhdYf]cX'UbX'k YfY'bchdfYj]ci g`mgYfj YX']b Ya Yf[YbWng\Y`hYfg'cf'h\Y'

- ci IfYUW\`dfc[fUa `Xi f]b[`h\Y`dfYj]ci g`hkc`nYUfgž`UbX`h\Y`dYfWYbhU[Y`cZhchU``X]gh]bW\\ci gY\c`Xg`h\Un`YbhYfYX`U`g\Y`hYf`h\]g`bi a VYf`fYdfYgYbhg'''`
- XŁ; cU!gYhjb[ a Yh\cXc`c[mB#5"
- YŁ FYdcfhjb[ a Yh\cXc`c[m"
  - JŁ Number: HNY bi a VYFcZX]gh]bVlf\ci gY\c`Xgh\UhYbHYfYX'h\Y'Ya Yf[YbWhg\Y'hYfg' Xi f]b['h\Y'fYdcfhdYf]cX'h\UhX]X'bchUWVgg'Ya Yf[YbWhg\Y'hYfg'cf'h\Y'ci hfYUW\'dfc[fUa Xi f]b['h\Y'dfYj]ci g'+' \$ XUng'': cf'h\]g'W'VV`Uh]cbžh\Y'Z]fgh7c`i a Vi g' GYfj]W'Dc]bhYbhfmfYWcfX'YbhYfYX'Xi f]b['h\Y'fYdcfhdYf]cX'VmUb'Ya Yf[YbWh' g\Y'hYf']g'i gYX'''
  - ]]Ł Rate: H\Y bi a VYf cZbYk `m\ca Y`Ygg \ci gY\c`Xg Zfca `f]ŁX]j ]XYX Vmth\Y bi a VYf cZX]gh]bVth\ci gY\c`Xg th\UhYbhYfYX`U'g\Y`hYf Xi f]b[ 'th\Y`fYdcfh]b[ 'dYf]cX''

## &&LRapid Re-housing Capacity Gap

- UŁ **Di fdcgY.** \*\equiv X'FUd]X'FY!\ci g]b[ 'gngh\a kg'UV]`]hmhc'a YYhW]YbhXYa UbX'Zcf' ]hg'gYfj ]Wg''
- VŁ GngtYa g. G]b[ Y 5Xi `hFUd]X FY!\ci g]b[
- VY 8YZ|b]hcb. Bi a VYfcZW]Ybhgk\c'Yl]hh\Y'FF<'Dcc'Xif]b['h\Y'dYf]cXk]h\cihVY]b['qYf] YX'Vmh\Y'FF<'dfc[fUa ž</p>
- XŁ; cu'!gYhilb[ a Yh\cxc'c[m6UqYX cb df]cf dYfZcfa UbW"
- YŁ **FYdcff]b[ a Yth.cXc`c[ m** HNY bi a VYf`cZW]Ybtg`k]th. Ub FF < Dcc``9l]h8UtY Xi f]b[ 'th.Y' fYdcfthdYf]cX k \c Yl]hk]th. U X]gdcg]t]cb cZÎ Df]cf]t]nYX # BchGYfj YX''l

#### &' LRecidivism (%):

- UŁ **Di fdcgY**. ±x]/WhYg h\Y gnghYa Ñg gi WWgg]b YbX]b[ \ca Y`YggbYgg Ug a YUgi fYX`Vm bi a VYf cZ\ci gY\c`Xg k\c UhtU]b \ci g]b[ 'UbX`Xc bchfYhi fb hc \ca Y`YggbYgg gi VgYei Ybhhc gi WWggZi `\ci g]b[ ci hWta Y":5`ck Yf fUhY`]g Wtbg]XYfYX`dcg]h]j Y"
- VŁ Gnatya a 5``YI WdhDYfa UbYbhGi ddcftij Y <ci glb[ '
- WŁ 8YZ]b]h]cb.
  - ]Ł:cf'U``gnghYa g'Yl WYdh<ca Y`YggbYgg'DfYj Ybh]cbžh\Y'hchU`bi a VYfcZX]gh]bWi\ci gY\c`Xg'h\Unk YfY'Yl ]hYX'Xi f]b['h\Y'fY'Yj UbhfYdcfhdYf]cX'k ]h\'U'gi WW'ggZi``\ci g]b['ci hWta Y'fUg'XYZ]bYX'Zcf'h\Un'gnghYa Ł'UbX'\UX'Ubmg\Y'hYfcf'ghfYYh ci hYUW\WtbhUMik ]h\]b'% \$'XUng'cZh\Y'gi WW'ggZi``\ci g]b['ci hWta Y'''H\]g' a YUgi fY']g'Yl dfYggYX'Ug'U'dYfW'bhU[Y'cZhchU''X]gh]bWi\ci gY\c`Xg'k ]h\'Ub'Yl ]hhc'\ci g]b['fUg'XYZ]bYX'Zcf'h\Un'gnghYa Ł'''
  - ]]Ł: cfth.Y:<ca Y`YggbYgg DfYj Ybh]cb gnghYa žth.Y'bi a VYfcZYI ]hYX'\ci gY\c`Xg'k ]th. U'gi WWYggZi ``\ci g]b['ci tWta Y`flug`XYZ]bYX'Zcfth.UhgnghYa Łth.Uh'\Uj Y`Ubmg\Y`hYfcfghfYYhci ffYUW.WtbtUWtik ]th.]b'' \*) `XUng`cZth.Y'gi WWYggZi ``\ci g]b['ci tWta Yž' YI dfYggYX'Ug'U'dYfWbtU[Y'cZhctU`X]gh]bWti\ci gY\c`Xg'k ]th. 'Ub'YI ]htc'\ci g]b['flug' XYZ]bYX'Zcfth.UhgnghYa Ł''
- XŁ; cU'!gYH']b['a Yh\cXc`c[m'A YYhcf'VY`ck '7G6'6cUfX'9bXg'Dc`]Whcf'df]cf' dYf7cfa UbW''''



- YŁ **FYdcfhjlo['a Yh\cXc`c[m**:'5'dYfWlbhU[Y'fUhY'fYZYVMjlb['h\Y'bi a VYf'cZfYV]jX]j]gh \cigY\c`Xg']b'U'gnoghYa 'fY`UhjjY'hc'h\Y'bi a VYf'cZ\cigY\c`Xg'h\Uh'Yl]hYX'h\Y'gnoghYa ' k]h\'U'gi WW'ggZi``\cig]b['cihWta Y'fogdYV]ZJWhc'h\UhgnoghYa Ł'''
  - ]Ł FUHY 1 flbi a YfUhcf#XYbca ]bUhcfŁl %\$\$
  - ]]Ł 8Ybca ]bUhcf. '7c\cfhcZ\ci gY\c`Xg'k\]W\ 'UHU]bYX'U'gi \WYggZ ``\ci g]b[ 'ci HWa Y'df]cfhc'h\Y'YbX'cZh\Y'fYdcfhdYf]cX'''
    - fl/LEi Uffl/fml/t\cfh 7U'W 'Uh/ h\y bi a VYfcZX]gh]bVl/l\ci gy\c`Xg'k ]h\ U gi VN/ggZ `\ci g]b[ ci h\/ta y'k ]h\]b h\y ei Uffl/fmfydcfhdyf]cX'lk c ei Uffl/fg df]cf"Note: for Prevention system, the cohort is the number of distinct households with a successful housing outcome within the same reporting period of the previous year.
    - f&L GYa ]!Ubbi U`Wt\cfh``7U`W`UhY h\Y bi a VYf`cZX]gh]bWf\ci gY\c`Xg`k ]h\ U gi WWggZ ``\ci g]b[ ci hWta Y`k ]h\]b h\Y dfYj ]ci g`gYa ]!Ubbi U`fYdcfhdYf]cX" Note: for Prevention system, the cohort is the number of distinct households with a successful housing outcome within the same semi-annual reporting period of the previous year.
    - fl Ł 5bbi U Wt\cfh 7UW `UhY h\Y bi a VYf cZX]gh]bWh\ci gY\c`Xg k ]h\ U gi WYggZ `\ci g]b[ ci h\ta Y k ]h\]b h\Y Z[fgh\% \$ XUng cZh\Y Ubbi U fYdcfhdYf]cX" Note: for Prevention system, the cohort is the number of distinct households with successful a housing outcome within the previous year's annual reporting period.
  - ]]]k Bi a YfUhcf. Bi a VYf cZfYV[X]j ]ghg Zfca h\Y UVcj Y Wt\cfh
    - f%25fYV[k]j]gh\cigY\c`X`]gXYZ[bYX`Ug`U`X]gh]bVhi\cigY\c`X`Zfca 'h\Y`V&\cfh XYZ[bYX`]b`f]]Eh\Un'YbhYfg`h\Y`Ya Yf[YbVhig\Y`hYf`cf`ghfYYhci hfYUVN gnghYa g` k]h\]b`%\$XUng`UZhYf`U`gi VWYqqZi``\cig]b[`Yl]h'``
    - f&L: cf'h\Y'<ca Y`YggbYgg'DfYj Ybh]cb'gnghYa g'h\Y'h]a Y!fUb[Y'UVcj Y']g'fYd`UWYX' Vm' \*) 'XUng''''
- &( \text{\Locality} \te
  - UŁ **Di fdcgY**. "±0X]/WIHYg'H\Y'gngHYa lÑg'gi WW'gg']b'YbX]b['\ca Y`YggbYgg'Ug'a YUgi fYX'Vm' H\cgY'k\c'UHHU]b'dYfa UbYbhž']bXYdYbXYbh'\ci g]b["'5'\][\Yf'bi a VYf'UbX'fUHY'UfY' Wbg]XYfYX'dcg]h]j Y"''
  - VŁ **GnghYa g.** DYfa UbYbhGi ddcfhjj Y <ci gjb[ '
  - VY 8YZJb]hjcb. 5a cb[ X]ghjbVhi\ci gY\c`X`YI]hgžh\Y`dYfWbhU[Y`h\UhYI]hh\Y`gnghYa `Xi f]b[ h\Y`fYdcfhdYf]cX`Zcf`ch\Yf`dYfa UbYbh\ci g]b[ fUg`XYZJbYX`]b`HUV`Y`%Z''''
  - XL; cU!gYhjb[ a Yh\cXc`c[mA YYhcfYl WYX df]cf'dYfZcfa UbW"
  - YŁ **FYdcff]b[ 'a Yth.cXc`c[ m**'H\Y 'hchJ' 'bi a VYf'cZX]gh]bVh'\ci gY\c`X 'YI ]hg 'Xi f]b[ 'th\Y' fYdcfhdYf]cX'k ]h\ XYgh]bUh]cbg 'h\Uh'UfY 'Wtbg]XYfYX 'gi WW 'ggZ ``\ci g]b[ 'ci hWta Yg' X]j ]XYX Vm'h\Y 'hchJ' bi a VYf'cZX]gh]bWh'\ci gY\c`Xg'YI ]hYX Xi f]b[ 'th\Y 'fYdcfhdYf]cX''' Note: Deceased households are not included in the count of households exited. '''
- &) LSuccessful Housing Outcome (# and %): FYZYf hc HUV Y '% Zcf 'U 'Wta d 'YhY '`]ghcZ\ci g]b[ 'ci hWta Yg"

- UŁ **Di fdcgY**. "±0X]/WhYg'h\Y'gnghYa Ñg'gi WWgg']b'YbX]b['\ca Y'YggbYgg"'5'\][\Yf'bi a VYf' UbX'fUhY'UfY Wtbg]XYfYX'dcg]hjj Y"
  - ]Ł DYfa UbYbhGi ddcfhjj Y'<ci g]b[. ≠x]WUhYg'h,Y'gnghYa Ñg'gi WWgg']b'YbX]b['\ca Y'YggbYgg'Ug'a YUgi fYX'Vmh\cgY'k\c'fYhU]b'dYfa UbYbh\ci g]b['cf'UhhU]b'ch\Yf'dYfa UbYbh\ci q]b[''
  - ]]Ł 5``ch\Yf.''±bX]/WhYg'h\Y'gnghYa Ñg'gi WWgg']b'YbX]b['\ca Y`YggbYgg'Ug'a YUgi fYX' Vmh\cqY'k\c'UhU]b'ch\Yf'hfUbq]h|cbU'cf'dYfa UbYbh\ci q]b['''

# VŁ GnghYa g. 5"

# WŁ 8YZIb]hicb."

- ]Ł: cf'U``gnghYa g`Yl W'dhDYfa UbYbhGi ddcfh]j Y`<ci g]b[`UbX`<ca Y`YggbYgg`
  DfYj Ybh]cb. h\Y`bi a VYf`cZX]gh]bVh\ci gY\c`Xg`h\UhYl]hXi f]b[`h\Y`fYdcfhdYf]cX`
  f]"Y"z``UhYghYl]hZcf`\ci gY\c`Xg`k]h\a i `h]d`Y`ghUng;Xi f]b[`fYdcfhdYf]cXŁhc`
  gi WWggZi``\ci g]b[z`Ug`XYZ]bYX`]b`HUV`Y`%z`UbX`h\Y`dYfWbhU[Y`cZhchU`X]gh]bWh`\ci qY\c`Xg`Yl]hYX`h\]q`bi a VYf`fYdfYqYbhq"```
- ]]Ł: cf DYfa UbYbhGi ddcfh]j Y < ci g]b[. h\Y bi a VYf cZX]gh]bVh\ci gY\c`Xg h\Uh fYa U]b ]b h\Y DYfa UbYbhGi ddcfh]j Y < ci g]b[ gnghYa cf h\UhYl ]hh\Y gnghYa Zcf ch\Yf dYfa UbYbh\ci g]b[ flUg XYZ]bYX ]b HUV Y % UbX h\Y dYfWbhU[ Y cZhchU` X]gh]bVh\ci gY\c`Xg gYfj YX h\]g bi a VYf fYdfYgYbhg"…
- ]]]L:cf<ca Y`YggbYgg`DfYj Ybh]cb.h\Y`bi a VYf`cZX]gh]bVhi\ci gY\c`Xg`h\Uh'Uh'U]b` ghUV`Y`\ci g]b[`Uh'Yl]hZfca 'h\Y`gnghYa 'UbX'h\Y`dYfWfbhU[Y`cZhchU``X]gh]bVhi\ci qY\c`Xg`Yl]h/X`h\]q`bi a VYf`fYdfYqYbhq''``

# XŁ; cujgyhjb[ a yhcxccc[mA yyhcfyl wyx 7G6 6cufx 9bxg Dc]/whi

- ]Ł:cf'U``gnghYag'YIWYdhDYfaUbYbhGiddcfhjjY'<cig]b[.`Ai`hjd`mh\Y'dYfWYbhU[Y`[cU`fgYhVm9bXg'Dc`]WhŁVmh\Y'dfcYWhYX'biaVYfcZYI]hYX'\cigY\c`Xg''
- DYfa UbYbhGi ddcfhjj Y'<ci g]b[. `A i `h]d`m'h\Y'dYfW'bhU[Y'[cU`Vm'h\Y'dfcYVWYX' bi a VYf`cZ\ci gY\c`Xg`gYfj YX"'</p>

# YŁ FYdcfhlb[ a Yh\cXc`c[m"

- JŁ:cf'U``gnghYa g'Yl WYdhDYfa UbYbhGi ddcfhj Y'<ci g]b[..7U`W\`UhY'h\Y'hcHJ` bi a VYf`
  cZX]gh]bWh\ci gY\c`X'Yl ]hg'Xi f]b['h\Y'fYdcfhdYf]cX'UbX'h\Y'hcHJ` bi a VYf'cZ
  XYgh]bUh]cbg'h\Uh'UfY Wtbg]XYfYX'gi WWggZi`\ci g]b['ci hWta Yg'Zcf'h\UhgnghYa "'
  : cf'h\Y'fUhYZX]j ]XY'h\]g'bi a VYf'cZGi WWggZi`\<ci g]b['Ci hWta Yg'Vmh\Y'bi a VYf'
  cZhcHJ`Yl ]hg'Xi f]b['h\Y'fYdcfhdYf]cX"''</pre>
- ]k: cf DYfa UbYbhGi ddcfhj Y <ci g]b[. Gi a 'h\Y hch' bi a VYf cZX]gh]bWf\ci gY\c`X' Yl ]hg Xi f]b[ 'h\Y fYdcfhdYf]cX'k ]h\ XYgh]bUh]cbg 'h\UhUfY Wbg]XYfYX gi WWggZi`\ci g]b[ ci hWta Yg UbX'h\Y bi a VYf fYg]X]b[ ]b DYfa UbYbhGi ddcfhj Y <ci g]b[ 'Uh h\Y YbX cZh\Y fYdcfhdYf]cX'': cf 'h\Y fUhYžX]j ]XY h\]g bi a VYf cZGi WWggZi`\ci g]b[ 'Ci hWta Yg Vmh\Y hch' bi a VYf cZX]gh]bWf\ci gY\c`Xg gYfj YX Xi f]b[ 'h\Y fYdcfhdYf]cX''' Note: Deceased households are not included in the count of households served.'''

#### &\* \Langle System Occupancy Rate (%):

UŁ **Di fdcgY**. ±bX]/WhYg:YZZ]/V]Ybhi gY:cZWta a i b]hmifYgci fW/g":5\][\:cW/VdUbWhifUhY:
]bX]/WhYg:gnghYa :YZZ]/V]YbWhiUhihi fb]b[:cj:Yf:i b]hg:UbX:dfcj:]X]b[:U:gnghYa :h\.Uh]g:]b:
XYa UbX":



- VŁ GnghYa g. DYfa UbYbhGi ddcfhjj Y < ci gjb[ "
- VY 8YZIb]In]cb. 5 dYfW/bHJ[Y h\UnifYZYVMg h\Y Uj YfU[Y bi a VYf cZVV]Ybhg fYg]X]b[ ]b gi ddcfn]j Y \ci g]b[ dYf b][ \hfY`Uh]j Y hc h\Y cj YfU``gnghYa `VVJdUN]Im'i```
- XŁ; cu'!gYH]b[ a Yh\cxc'c[mA YYhcfYl WYX 7G6 6cUfX 9bXg Dc']Wh
- - f&L Rate: 'GnghYa 'cWW dUbWhbi a VYf'ffci bXYX'hc'bYUfYghik \c'Y'bi a VYfEX]j ]XYX'Vn'h.Y'gnghYa 'VWdUWJhn'i'

#### &+ŁTurnover Rate (%):

- UŁ **DifdcgY.** ±bX]/WhYg:h\Y:gnghYa Ñg:YZZYVMjj YbYgg:]b:dfcj ]X]b[:ghUV`Y`\cig]b["FUHY`]g: acb]hcfYXžVi hbchYjU`i UhYX"
- VŁ GnghYa g. DYfa UbYbhGi ddcfhji Y <ci gjb[
- W. 8YZJb]hjcb. H.Y fUhY Uhk \]W. i b]hg VYWta Y j UWUbhfY Uhjj Y hc h.Y gnoghYa WUdUMjhmi ...
- XŁ; cu'lgythjb['a yth.cxc'c[m'GyhVugyx'cb'df]cf'dyfzcfa UbW'"A cb]hcfyxžVi hbch' yj u'i uhyx"
- YŁ **FYdcffjlb[ a Yth.cXc`c[ m**:H\Y hchU` bi a VYf`cZX]gh]bVlfi\ci gY\c`X`YI ]hYX`Xi f]b[ 'U`fYdcfhi dYf]cX`X]j ]XYX`Vmh\Y`gnghYa `VVIdUV]hmXi f]b[ 'h\Y`gUa Y`fYdcfhidYf]cX''

## &, LUsage of CSB Direct Client Assistance (DCA) (# and %):"

- VŁ GnghYag FUd]XFY!\cig]b[ UbX < ca YYggbYgg DfYj Ybh]cb
- VY 8YZIb]Injcb. H.Y bi a VYfcZYI]InyX:X]gh]bWh\ci gY\c`Xg`fYWY]j ]b[ Y]h\Yf'HfUbg]Injcb`875` Xi f]b[ "h\Y fYdcfhdYf]cX`cf`fUd]X`fY!\ci g]b[ #DfYj Ybh]cb`875`Xi f]b[ "UbX#cf`Zcf`i d`hc` \$`XUng`df]cf`hc`cf`UZhYf'h\Y`fYdcfhdYf]cXžUbX'h\Y`dYfWYbhU[Y`cZhchU`X]gh]bWh\ci gY\c`X`YI]ng`h\]g`bi a VYf`fYdfYgYbhg'"
- XL; cU!gYH]b[ a Yh\cXc`c[mA YYhcfYl WYX 7G6 6cUfX 9bXg Dc`]Wh
- YŁ FYdcfhho[ a YhlcXc'c[m
  - JE HNY horbu bi a VYfozYI ]hYX X]gh]bWh\ci gY\c`Xg'h\UnfYW]j YX 7G6 875 Xi f]b[ 'h\Y' fYdcfndYf]cX": cf'fUd]X fY!\ci g]b[#dfYj Ybh]cbž875 fYW]j YX i d'ho \$ XUng'df]cf' ho cf'UzhYf'h\Y'fYdcfndYf]cX ]g'U`go ]bWi XYX"
  - ]]Ł Hc cVhU]b i gU[Y fUhYžX]j ]XY h\Y bi a VYf cVhU]bYX ]b f]Ł Vmh\Y hchU bi a VYf cZ X]gh]bVh\ci gY\c Xg h\UhYl ]hYX h\Y gnghYa Xi f]b[ h\Y fYdcfhdYf]cX" < ci gY\c Xg h\UhYl ]hYX gi WWggZ `mk ]h\ci hUWWgg]b[ 7G6 875 UfY Yl Wi XYX Zfca h\Y XYbca ]bUhcf"

# &- ŁUsage of CSB Direct Client Assistance (DCA) (Average \$ Amount per Household):

- UŁ **Di fdcgY**. ±bX]/WhYg'h\Uhih\Y'gnghYa ']g'Wtgh!YZZ]W]Ybh']b'UWWYgg]b['875"'5`ck Yf' Uj YfU[Y'Ua ci bhdYf'\ci gY\c`X']bX]/WhYg'h\Uhih\Y'gnghYa '\Ug``Yj YfU[YX'ch\Yf' Wta a i b]hmfYgci fWYg''
- VŁ GnghYa g. FUd]X FY!\ci g]b[ 'UbX'<ca Y`YggbYgg DfYj Ybh]cb''
- VY 8YZJb]Injcb. HAY Uj YfU[Y Xc"Uf Ua ci bhcZhchu" 7G6 X]fYVYiW]YbhUgg]ghUbW fYVY]j YX dYf X]ghjbVYi\ci gY\c"X YI ]hYX Xi f]b["h\Y"fYdcfhdYf]cX""
- XŁ; **cU'!gYHjb['a Yh\cXc'c[m**'6UgYX'cb'\]ghcf]WU'hfYbXgž'UbhJVJdUhYX'dYfZcfa UbW'ž Uj U]'UV'Y fYgci fWgžUbX'gnghYa 'XYg][b"
- YŁ **FYdcffjb[ 'a Yth.cXc'c[ m**:HcHJ' 'a cbYtUfm'Ugg]gHJbW' 'Uk UfXYX' hc'\ci gY\c`Xg'th.Uh YI ]thYX'Xi f]b[ 'fYdcfhidYf]cX'#'hcHJ' 'bi a VYf'cZX]gtjbWt\ci gY\c`Xg'YI ]thYX'th.UhfYW']j YX' Ugg]gtJbW'''



HJVY% Gi WWqqqZi ``<ci q]b[ Ci hVda Yg (see above items 24 and 25)

< I 8'8Ygh]bUh]cb'	8cYg' <yux'cz \ci gY\c`X'7cblfc`' <ci 3%'<="" g]b[="" th=""><th>Gi WWggZi`` <ci g]b[`<br="">Ci HWta Y3`</ci></th></ci></yux'cz 	Gi WWggZi`` <ci g]b[`<br="">Ci HWta Y3`</ci>
%1 9a Yf[YbWng\Y`hYfz̃]bWl X]b[`\chY``cfa chY``dU]X`Zcfk]h\`Ya Yf[YbWng\Y`hYfjci W\Yff]bWl X]b[`U'nci h\`g\Y`hYfz̃cfWla d[fci bX`dU]X`Zcfk]h\`Ya Yf[YbWng\Y`hYfjci W\YfL	Bc <sup>·</sup>	Bc <sup>·</sup>
& 1 'HfUbg]h]cbU`\ci g]b[ 'Zcf'\ca Y`Ygg'dYfgcbg'f]bWi X]b[ '\ca Y`Ygg'noi h\Ł! <i &<="" 'dfc[fua="" 'hfubg]h]cbu`@j="" ]b[="" c`jyhyfubg'dfc[fua="" ca="" gy`l="" k="" td="" ufm\uj="" w_`yvyffmkci="" yb'!="" ybñg'dfc[fua="" ža="" žjc5;=""><td>J Uf]Ygʻ</td><td>Bc '' fPl Wdh7cf' 9a Yf[YbWhG\Y'hYfg' UbX'Ci HYUWk'</td></i>	J Uf]Ygʻ	Bc '' fPl Wdh7cf' 9a Yf[YbWhG\Y'hYfg' UbX'Ci HYUWk'
' 1 DYfa UbYbh\ci g]b[ 'fth\Yf'h\Ub'FF<ŁZcf'Zcfa Yf'm\ca Y'Ygg'dYfgcbg'!' U``DG< 'UbX'7c7'dfc'YVMgž <ca 8ž7g6'gi="" 9ž<i="" td="" vg]x]nyx'<=""><td>M/g<sup>·</sup></td><td>M/g<sup>-</sup></td></ca>	M/g <sup>·</sup>	M/g <sup>-</sup>
( 1 DgnMN]Uhf]WNcgd]hU`cfich\YfidgnMN]Uhf]WZUVY]hn*i	Bc <sup>·</sup>	Bc <sup>·</sup>
) 1 GiVghUbWrUvigYhfYUhaYbhZUWJ]hmcfXYhclWhbhYf&	Bc <sup>·</sup>	Bc <sup>·</sup>
* 11 < cgd]hU`cf`ch\Yf`fYg]XYbh]U`bcb!dgnhN\]Uhf]Wa YX]\W`ZUN]\]hn*	Bc <sup>·</sup>	Bc <sup>·</sup>
+ 1 '>U]`ždf]gcb`cf`î j Yb]`Y`XYhYbh]cb`ZJMJ]hm	Bc <sup>·</sup>	Bc <sup>·</sup>
, 1 FYbHJ VmM]Ybhžbc cb[c]b[ \ci g]b[ gi Vg]Xm! df]j UhY`mck bYXža Uf_YhfYbh\ci g]b[	M/g <sup>-</sup>	M/g <sup>·</sup>
- 1 CkbYX VmW]Ybhzbccb[c]b[ \cig]b[ gi Vg]Xm	M <b>r</b> g <sup>·</sup>	M/g <sup>·</sup>
%\$`1`GlUnjb[`cf`]j]b[`k]h\`ZUa]`nžhYa dcfUfmhYbi fY`fY"["žfcca ž UdUfha Ybhcf`\ci gY!&`	Bc <sup>·</sup>	Bc <sup>·</sup>
%%1 GHUnjb[ cf`]j ]b[ k ]h\ Zf]YbXgžhYa dcfUfmhYbi fY fY"[ "žfcca ž UdUfha Ybhcf\ci gYL*	Bc <sup>·</sup>	Bc <sup>·</sup>
% 1 < ch/ cf a ch/ dU]X Zcf k ]h\ci hYa Yf[ YbWng\Y hYf j ci W\Yf	Bc <sup>-</sup>	Bc <sup>·</sup>
% '1': cghYf'VWfY'\ca Y'cf'ZcghYf'VWfY'[fci d'\ca Y&'	Bc <sup>·</sup>	Bc <sup>·</sup>
%( 1 D`UM`bcha YUbhZcf`\UV]hUnjcb fY"["žU"j Y\]\MžUb UVUbXcbYX Vi ]`X]b[žVi g#hfU]b#gi Vk UmghUnjcb#Ujfdcfhcf`Ubnk \YfY ci hg]XYŁ	Bc <sup>-</sup>	Bc <sup>-</sup>
%) '1 'GUZY' < Uj Yb'	Bc <sup>·</sup>	Bc <sup>·</sup>
%* 1 FYbrU VmW]Ybhžk ]h\; D8 HĐ\ci g]b[ gi Vg]Xm	M/g <sup>-</sup>	M/g <sup>·</sup>
%+ 1 FYbrU VmW]Ybhžk ]h\ FF< cfYei ]j UYbhgi Vg]Xm	Mg <sup>·</sup>	M/g <sup>·</sup>
% 1 FYbHJ VmMjYbhžk jh\ J5G< gi VgjXml JYhYfUbg 5ZZUjfg Gi ddcfhjj Y <ci fj5g<ł<="" gjb[="" td=""><td>M/g<sup>·</sup></td><td>M/g<sup>-</sup></td></ci>	M/g <sup>·</sup>	M/g <sup>-</sup>
% 1 FYbhU VmMjYbhžk jh\ ch\Yf`cb[c]b[ \ci g]b[ gi Vg]Xm	M/g <sup>-</sup>	M/g <sup>·</sup>
&\$ 1 Ck bYX VmW]Ybhžk ]h\ cb[ c]b[ \ci g]b[ gi Vg]Xm	M/g <sup>-</sup>	M/g <sup>·</sup>
&%1 GHUn]b[ cf^]j ]b[ k]h\ ZUa]mädYfa UbYbhHYbi fY	M∕g <sup>%·</sup>	M/g <sup>··</sup>
&& 1 GHUnjb[ cf^j] jb[ k jh\ Zf]YbXgzdYfa UbYbhhYbi fY	M∕g <sup>%</sup>	M/g <sup>-</sup>
&' '1'8YW <b>Y</b> UgYX'	Bc <sup>·</sup>	Bc <sup>·</sup>
&( '1 @cb[!hYfa 'WlfY ZUNY]hmcf'bi fg]b[ '\ca Y'	Bc <sup>·</sup>	Bc <sup>·</sup>
&) 1 A cj YX Zfca cbY < CDK 5 Z bXYX dfc YVMrhc < CDK 5 D<	M/g <sup>·</sup>	M/g <sup>-</sup>
&* 1 A cj YX Zfca cbY < CDK 5 Z bXYX dfc YVMrhc < CDK 5 Hx	Bc <sup>·</sup>	Bc <sup>·</sup>
&+ 1 FYg]XYbh]U`dfcYVMicf`\U`ZkUm\cigY`k]h\bc`\caY`Ygg`VM]hYf]U`	Bc <sup>·</sup>	Bc <sup>·</sup>
&, 1 Bc 9 ]h+bhYfj ]Yk 7ca d`YhYX	Bc.	Bc <sup>·</sup>
&- '1 'Ch\Yf'	Bc <sup>·</sup>	Bc <sup>·</sup>

0/

<sup>%&</sup>lt;YUXg`cZ\ci gY\c`X'UfY`XYhYfa ]bYX'hc`VY`]b`WtbHfc``cZh\Y]f`\ci g]b[`]Zh\Y``YUgY#a cff[U[Y`]g`]b'h\Y]f`bUa Y`cf`]Zh\Ym ch\Yfk ]gY`\Uj Y`U'k f]hhYb`U[ fYYa Ybhi\Uhi[]j Yg'h\Ya 'U'f][\hhc`fYg]XY`]b'h\Y]f`\ci g]b[ žgi W\`Ug'U'fcca a UhY`U[ fYYa Ybhi``` &'5'gi WWggZi``\ci g]b[ 'ci hWta Y`Zcf'<i W\_YVYfffm<ci gY`9a Yf[YbWnG\Y`hYf''`

<i 8'8yghjbuhjcb'<="" th=""><th>8cYg'<yux'cz \ci gY\c`X'7cblfc`' <ci 3%'<="" g]b[="" th=""><th>GiWWYggZi`` <cig]b[' CihWeaY3'</cig]b[' </th></ci></yux'cz </th></i>	8cYg' <yux'cz \ci gY\c`X'7cblfc`' <ci 3%'<="" g]b[="" th=""><th>GiWWYggZi`` <cig]b[' CihWeaY3'</cig]b[' </th></ci></yux'cz 	GiWWYggZi`` <cig]b[' CihWeaY3'</cig]b[' 
'\$177]Ybh'8cYgbNh?bck	Bc <sup>·</sup>	Bc <sup>·</sup>
' %1 '7`]YbhFYZI gYX	Bc <sup>·</sup>	Bc <sup>·</sup>
'&1'8UHU'Bch7c``YVMYX'	Bc <sup>-</sup>	Bc <sup>·</sup>



# : M&\$&\$ Dfc[fUa %9j Ui Uh]cb A Yh\cXc`c[m

H\Y'9j U'i Uhjcb'A Yh\cXc'c[mXcWa YbhYghUv']g\Yg'h\Y'di fdcgYžXYZjb]hjcbž[cU'!gYhhjb[ž'UbX'fYdcfhjb['a Yh\cXc'c[mZcf'YUW\cZh\Y']bX]WJhcfg'h\Uh7G6'UbX'h\Y'7c7'W'ffYbhm'hfUW\_Zcf'h\Y]f'fYdcfhjb['bYYXg''

DifdcgY. ]XYbh]Z]Yg h\Y fYUqcb Zcf h\Y ]bX]VVIhcf

Dfc YVMa, [XYbh]Z[Yg h Y dfc YVMg Zcf k \ ]VX Ub ]bX[VVIhcf Udd \ ]Yg :

**8YZ|b]hcb**. 7G6 cf 7c7#<1 8 XYZ|b]hcb Zcf h\Y ]bX]\Whcf

; **cU'!gYh]b['a Yh\cXc`c[m**ii gYX`VmYUW\`U[YbWhhc gYh[cU'g'Ufci bX'h\Y']bX]Whcf' **FYdcfhb['a Yh\cXc`c[m**XYhJ]`YX`XYqWf]dh|cb'cb'\ck'7G6`]g'W'\W'\Uh]b['h\Y']bX]Whcf''

## FYdcfhjb[ '7cbj Ybhjcbg'

- A YUgi fYg'Udd'mcb'mhc'\YUXg'cZ\ci gY\c'X'k]h\'h\YYI W'dh]cb'cZ]bWta Y!fY'UhYX' a YUqi fYg":
- &Ł 5 ZUa jimijg XYZjbYX Ug U \ci gY\c X Wtbgjghjb [ cZUh YUghcbY UXi hiUbX Uh YUghcbY a lbcf W ] X"
- ' Ł H\Y'hYfa Î\YUX'cZ\ci gY\c`XÎ 'Udd`]Yg'Vch\ 'hc`ZUa ]`]Yg'UbX'hc`g]b[ `Y`UXi `hiW]Ybhg''`
  9UW\ ZUa ]`mi b]ha i gh\Uj Y'U\YUX'cZ\ci gY\c`X''5\ci gY\c`X'a Umbch\Uj Y'a cfY`
  h\Ub`cbY`\YUX'cZ\ci qY\c`X''
- (Ł HNY hYfa Î\cigY\c`XI XYgWf]VYg U i b]hWtbg]gh]b[ cZY]hNYf U ZUa ] mcf U g]b[ `Y UXi `h'
- 9a Yf[YbWfg\Y`hYf'fYdcfh]b[ a Yh\cXc`c[m]bWl XYg'cj YfZck bi a VYfg"; cU`g'Xc bch ]bWl XY'cj YfZck "

# Di fdcgYž8YZ]b]h]cbž; cU!gYhh]b[ / FYdcfh]b[ A Yh\cXc`c[]Yg(in alphabetical order)

## **%** Average Length of Participation (Days):

- UŁ **Di fdcgY**. 5 fYUgcbUV mg\cfh`Yb[h\ cZdUfh]VJdUh]cb`]bX]VVIhYg'h\Uhih\Y'dfcYVIhi]g' Ugg]gh]b[`\ci gY\c`Xg'hc`UV\\]Yj Y`]bXYdYbXYbW'k]h\ci h`cb['hYfa 'fY`]UbW'cb'h\Y' dfcYVIh''
- VŁ **Dfc^YWkg**, FUd]X.FY!\ci g]b[ž<ca Y.YggbYgg:DfYj Ybh]cbžUbX.GGJ: dfc^YWkg
- VY. 8YZJb]h]cb. H.Y.Uj YfU[Y bi a VYf cZXUng h\UhYl]hYX X]gh]bWi\ci gY\c`Xg fYW]j YX gYfj ]Wg Ug a YUgi fYX Zfca h\Y dc]bhcZYbhfmhc h\Y Yl]hXUhY Zfca h\Y dfcYWh'
- XŁ; cu'!gYhnjb['a Yh\cXc'c[m:6UgYX'cb'dfc'YVhiXYg][b'UbX'UbhjV]dUhYX'dYfZcfa UbW'''
  A YYhcf'VY`ck '7G6'6cUfX'9bXg'Dc`]Wh'i
- YŁ **FYdcfh]b[ a Yth.cXc`c[ m** fYl ]hXUhY i Ybhfn#Ybfc``a Ybh#Yb[ U[ Ya YbhXUhYŁ# h\Y bi a VYf`cZhchU``X]gh]bVhi\ci gY\c`Xg`gYfj YX`UbX`Yl ]hYX`Zfca `dfc^YVhiXi f]b[ `h\Y`fYdcfh` dYf]cX"

#### &L Average Length of (shelter) Stay (LOS)(Days):

Uk **DifdcgY**. 5 fYUgcbUV mg\cfh@CG ]bX]WhYg h\YdfcYVhNg gi Wwgg ]b fUd]X fY!\ci g]b[" #\Wb U`gc ]bX]WhY YZZ]WYbWmfY`UhYX hc hi fbcj Yf cZVYXgzk\]W ]g YggYbh]U`hc a YYh gnghYa XYa UbX Zcf Ya Yf[YbWmg\Y`hYf" 5 `ck Yf fUhY ]g Wbg]XYfYX dcg]h]j Y"

<sup>%5</sup>g;cZ%\$#%#&\$%(zih,Yih/fazîDfc[fUaï]g;fYd`UWYX'VmîDfc^YVMi'dYf`<I8Ñj;[i]XUbW\*"

- VŁ **Dfc:YVMg.** 9a Yf[YbWmG\Y`hYf:UbX:FUd]X:FY!\cig]b[
- WŁ 8YZIbIHcb."
  - JŁ 9a Yf[YbWmG\Y`HYf. H\Y`Uj YfU[Y`W\a i `Uhjj Y`bi a VYf`cZXUng`\ci gY\c`Xg`fYW]j Y` g\Y`HYf`Ug`a YUgi fYX`Zfca 'g\Y`HYf`YbHmhc`Yl]hcf``UghXUmcZfYdcfhdYf]cX"```
  - ]]Ł FUd]X FY!\ci g]b[#GJ: Dfc YVt/g. H\Y Uj YfU[Y bi a VYf c ZXUng\ci gY\c`Xg fYW]j Y gYfj ]Wg Ug a YUgi fYX Zfca 'h\Y dc]bhc ZYbhfm]b 'h\Y fUd]X fY!\ci g]b[ dfc YVt/hc h\Y Yl ]hXUhY Zfca 'h\Y Ya Yf[YbWhg\Y`hYff]bWi XYg df]cf cj Yf Udd]b[ j YhYfUb#hfUbg]hjcbU dfc YVt/ghUnMg Yl ]hXUhY Zcf GGJ: dfc YVt/gL"A YUgi fY Udd ]Yg cb`mhc \ci gY\c`Xg h\Uh\UX Ub YbhfmXUhY ]b h\Y fUd]X fY!\ci g]b[ dfc YVt/k ]h\]b h\Y fYdcfhdYf]cX" Note: Households who had a rapid re-housing entry date after their emergency shelter exit date are excluded from this calculation.
- XŁ; cU'!gYH']b['a Yh\cXc'c[m'A YYhcf'VY'ck '7G6'6cUfX'9bXg'Dc']MH'5b'Uj YfU[Y'@CG' Ygg'h\Ub'9bXg'[cU']g'Wtbg]XYfYX'hc'VY'h\Y'XYg]fYX'X]fYVMjcb''
- YŁ FYdcfh]b['a Yh\cXc`c[m''
  - ]Ł 9a Yf[YbWnG\Y`hYf. fYl]hXUhY`cf`fYdcfhYbX`XUhY`l YbhfmXUhYŁ#'h\Y`bi a VYf`cZ hchU`X]gh]bWh\ci gY\c`Xg`gYfj YX`k]h\]b h\Y`fYdcfhdYf]cX'''
  - ]]Ł FUd]X`FY!\cig]b[#GGJ: 'Dfc^YVMg.' fig\Y`hYfYI]hXUhY`l 'fUd]X`fY!\cig]b['YbhfmXUhYŁ' #Th\Y`bi a VYf`cZhchU`X]gh]bWh`\cigY\c`Xg`gYfj YX`k]h\'Ub`YbhfmXUhY`]b'h\Y`fUd]X` fY!\cig]b['dfc^YVMk]h\]b'h\Y`fYdcfhdYf]cX'h\UhU`gc`YI]hYX`g\Y`hYf'''

## ' Ł Average Number of Service Instances (#)

- UŁ **Di fdcgY**. 5`ck bi a VYfcZgYfj ]WY]bghUbWrg]bX]WUhYg'h\Y'dfcYVMyg'YZZJVJYbWnjb'fUd]X'fY!\ci g]b['UbX`cb[!hYfa 'ghUV]]mh'
- VŁ **DfcYVMg** NA 75 FUd]X FY!\ci g]b[ DfcYVM
- VY 8YZ|b]h]cb. '5j YfU[Y'bi a VYf'cZg\Y'hYf'ghUng'dYf'X]gh]bVhiVV]YbhgYfj YX'k]h\]b'%&' a cbh\g'''
- XL; cU!gYH]b[ a Yh\cXc`c[mA YYhcf'VY`ck 7G6'6cUfXg'9bXg'Dc`]Wh''
- YŁ **FYdcff]b[ 'a Yth.cXc'c[m**'HcHJ' bi a VYf'cZg\Y'hYf'gHJng'dfcj ]XYX'k ]th.]b'th.Y'dUgh'%&' a cbth.g'#'HcHJ' bi a VYf'cZX]gh]bVlfVV]Ybhg'gYfj YX'Xi f]b[ 'th.Y'fYdcfhdYf]cX''

#### ( Ł Average Wait-time (min):

- UŁ **Di fdcgY**. '5 "ck 'k U]hhja Y ']bX]WUhYg 'h\ Y 'dfc 'Y Vhñy 'UV] `]hmhc 'dfca dhim'UXXfYgg 'W]Ybhg ']b 'bYYX"
- VŁ **DfcYVMg.** 7ccfX]bUNYX Dc]bhcZ5VWYgg fdl\cbYŁ
- VY. 8YZIb]Incb. H\Y'Uj YfU[Y'bi a VYf'cZa]bi hYg'U'W]YbhgdYbXg'cb'\c'X'k\]'Y'kU]In]b['hc' qdYU\_k]h\'U'fYdfYqYbhUnjj Y"
- XL; cU!gYhjb[ a Yh\cXc`c[mA YYhcf VY`ck 7G6 6cUfXg 9bXg Dc`]Wh
- YŁ FYdcffjb[ a YhkcXc`c[miH\Y hchU`bi a VYf`cZa ]bi hYg'W]Ybhg'gdYbhcb`\c`X'VYZcfY' hU`\_]b[ hc U'fYdfYgYbhUhjj Y'VYhk YYb'h\Y\ci fg'cZ+Ua 'UbX'%da 'X]j ]XYX'Vmh\Y' bi a VYf`cZWU`g'fYW]j YX'VYhk YYb'h\Y'\ci fg'cZ+Ua 'UbX'%da "



## ) Ł Carryover Households (#):

- UŁ **Di fdcgY**. ±bX]/WhYgʻj c`i a YʻcZ\ci gY\c`XgʻgYfj YX`Vmh\YʻdfcYVhik\]W\`Xc`bchYl ]hdf]cf` hc`h\Y`Z]fghXUmcZh\Y`fYdcfhdYf]cX"H\]gʻa YUgi fY`]gʻa cb]hcfYXžVi hbchYj U`i UhYX"
- VŁ **Dfc.YVMg.** FUd]X FY!\ci g]b[ ž<ca Y`YggbYgg DfYj Ybh]cbžGGJ: 'Dfc.YVMgž6YbYZ]hg' DUfhbYfg\]džUbX Ci hfYUW\ Dfc[fUa g'</p>
- VY 8YZIb]Injcb. 8]ghjbVMi\ci gY\c`Xg'h\UhYbhYfYX'h\Y'dfcYVMidf]cf'hc'h\Y'Z]fghiXUmcZh\Y' fYdcfhidYf]cX"
- XŁ; cu'!gYhjb['a Yh\cxc'c[m'6UgYx'cb'df]cf'dYfZcfa UbW'"=ZbYk'dfcYVhzh\Y'dfcYVhi a i ghdfcj ]XY'h\Y'fUhcbU'Y'Zcf'd'UbbYx'[cU'"
- YŁ **FYdcffjb[ 'a Yth.cXc'c[m**:H\Y'bi a VYfcZX]gfjbVti\ci gY\c`Xg'k]th 'Ub YblfmXUth' VYZcfY' +#%#LL 'Zcf'Ubbi U' bi a VYf/VYZcfY' +#%#LL 'Zcf'gYa]!Ubbi U'/VYZcfY' +#%#LLz'\%\$#\%#LLz'\#\%#LLz'\UbX' (#\%#LL 'Zcf'ei UfthYf'm'\UbX'bc \VtffYgdcbX]b[ 'YI]hXUthY' VYZcfY'th Y'gtUffncZth Y fYdcffjb[ 'dYf]cX'''

## \*Ł Detox Exits (#):

- VŁ **Dfc:YVkg**, A Ufm\Uj Yb '9b[ U[ Ya Ybh7YbhYf! GUZYhm
- W. 8YZIb]InJcb. HAY bi a VYfcZ\ci gY\c`Xg`gYfj YX h\UhYl]hhc`Ub`]bdUh]YbhXfi [ 'cf'U'Wc\c`` hYUha YbhZUW]hm'i``
- XŁ; cu'!gYHNjb[ a Yh\cXc'c[mA YYhcf'Yl WYX 7G6 gHJbXUfXg""
- YŁ **FYdcff]b[ a Yth.cXc`c[ m**ith.Y bi a VYf`cZX]gh]bVhi\ci gY\c`Xg'th.Uhk YfY`Yl ]hYX`k ]th. 'U` XYhcl `XYgh]bUh]cb`X]j ]XYX`Vmh\Y`hchU`bi a VYf`cZX]gh]bVhi\ci gY\c`Xg'th.UhYl ]hYX`th.Y` dfc^YVhiXi f]b[ th.Y`fYdcfhdYf]cX"fA YUgi fY`]g`VUgYX`cb`th.Y``UhYghYl ]h'Zcf`\ci gY\c`Xg` k ]th.`a i `h]d`Y`qhUnq;Xi f]b[ th.Y`fYdcfhdYf]cX"Ł

#### +Ł Diversion Recidivism (%):

- UŁ **Di fdcgY**. ±x]/WhYg'h, Y'dfc'YVMy'gi WW'gg']b'YbX]b['\ca Y'YggbYgg'Ug'a YUgi fYX'Vmh, Y' bi a VYf'cZ\ci gY\c'Xg'h, Uh'UfY'gi WW'ggZ ``mX]j YfhYX'hc'ch, Yf'Wa a i b]hmfYgci fWg' ]bghYUX'cZYbhYf]b['Ya Yf[YbWmg\Y'hYf'UbX'Xc'bchgi VgYei YbhmfYhi fb'cf'YbhYf' q\Y'hYf'UZhYf'h, Y'gi WW'qqZ ``X]j Yfq]cb"'5``ck Yf'fUhY']q'Wbq]XYfYX'dcq]hjj Y"'
- VŁ **Dfc^YVMg**. 7ccfX]bUhYX Dc]bhcZ5VW/gg ftd\cbY UbX ZJWY!hc!ZJW/X]j Yfg]cbŁ
- W. 8YZIb]Irjcb. H\Y hchu`bi a VYfcZ\ci gY\c`Xg'h\Unk YfY'gi WW'ggZi ``mX]j YfhYXXi f]b[ 'h\Y' fYdcfhdYf]cX'k ]h\ 'U'gi WW'ggZi ``X]j Yfg]cb'ci hWta Y'fUg'XYZ]bYX'Zcf'h\ Undfc^YWtZUbX' h\ Ungi VgYei YbhmYbhYf'g\Y'hYf'k ]h\ ]b'' \$'XUng'cZh\Y'gi WW'ggZi ``X]j Yfg]cb'ci hWta Y''' H\ ]g'a YUgi fY']g'YI dfYggYX'Ug'U'dYfW'bhU[Y'cZhchU`\ci gY\c`Xg'k ]h\ 'U'gi WW'ggZi ``X]j Yfg]cb'ci hWta Y'''
- XL; cU!gYH]b['a YH\cXc`c[mA YYhcf'VY`ck '7G6'6cUfX'9bXg'Dc`]Wh''
- YŁ **FYdcffjb[ a Yth.cXc`c[ m** '5 dYfW'btU[ Y fUtY fYZYVM]b[ 'th.Y 'bi a VYf`cZX]j Yfg]cb fYVJX]j ]gh\ci gY\c`Xg`fY`Ut]j Y tc'th.Y 'bi a VYf`cZ\ci gY\c`Xg`th.Utik YfY gi WW ggZi ``m X]j YftYX'''8]j Yfg]cb fYVJX]j ]ga 'fUtY`]g a YUgi fYX cb`mZcf`gYa ]!Ubbi U``UbX`Ubbi U``fYdcftidYf]cXg'''

- ]Ł FUHY 1 fibi a YfUhcf#XYbca ]bUhcfŁi '%\$\$'
- ]]Ł 8Ybca ]bUhcf. "7c\cfhcZ\ci gY\c`Xg'k\]W\"UHU]bYX'U'gi WVggZ\`X]j Yfg]cb' ci HVta Y'Xi f]b[ 'h\Y'fYdcfhdYf]cX""
  - fl/k GYa ]!Ubbi U`Wt\cfh``7U'W\`UhY'h\Y'bi a VYf`cZ\ci gY\c`Xg`k ]h\`gi WWggZi`` X]j Yfg]cb`ci h/vta Y`k ]h\]b h\Y`gYa ]!Ubbi U`fYdcfhdYf]cX''
  - f&L 5bbi U`Wt\cfh`7U'W'`UhY'h\Y'bi a VYf`cZ\ci gY\c`Xg`k]h\`gi WWggZi``X]j Yfg]cb` ci hWta Y`k]h\]b'h\Y'Ubbi U`fYdcfhdYf]cX'''
- ]]]k Bi a YfUhcf. Bi a VYf cZX]j Yfg]cb fYV[X]j ]ghg Zfca h\Y UVcj Y Wt\cfh
  - f%£5`X]j Yfg]cb`fYV]X]j ]gh`\ci gY\c`X`]g`XYZ]bYX`Ug`U`\ci gY\c`X`h\Uh`\Ug`U` gi WW`ggZi``X]j Yfg]cb`ci hWca Y`UbX`YbhYfg`h\Y`Ya Yf[YbWng\Y`hYf`gnghYa fYI Wi XYg`A Ufm`\Uj Yb!GUZYmžA Ufm`\Uj Yb!G\Y`hYf&<ci g]b[žUbX`<i V<u>V</u>`<ci gY` 9a Yf[YbWnG\Y`hYf£k]h\]b`\$`hc`'\$ XUng`UZhYf`h\Uhci hWca Y''``
  - f&LIg]b['h\Y'UVcjY'XYZ]b]h]cbžVVVV\'UhY'h\Y'bia VYf'cZ\cigY\c`Xg'h\UhYbhYf'h\Y'g\Y'hYf'gnghYa'k]h\]b`\$ hc'' \$XUng'UZhYf'U'gi WV\gqZ\`X]j Yfg]cb'ci hV&a Y'''

#### , Ł Exited Households (#):

- UŁ **Di fdcgY.** ±bX]/WhYg'j c'i a Y'cZ\ci gY\c'Xg'gYfj YX'Vm'h\Y'dfc'YWik\]/W. YI]hXi f]b['h\Y' fYdcfhdYf]cX"'H\]g'a YUgi fY']g'a cb]hcfYXžVi hbchYj U'i UhYX"'
- VŁ **Dfc^YVMg.** FUd]X.FY!\ci g]b[ž<ca Y.YggbYgg.DfYj Ybh]cbžGGJ: 'Dfc^YVMgžHfUbg]h]cbU` <ci g]b[ 'UbX'Ci hfYUVN Dfc[fUa g'
- VY 8YZ|b]h]cb. Bi a VYf cZX]gh]bVhi\ci gY\c`Xg'h\UhYI]hYX'h\Y'dfcYVhiXi f]b['h\Y'fYdcfh' dYf]cX"
- XŁ; cu'!gYhjb[ a Yh\cxc`c[mA YYhcfYl WYX df]cf'dYfZcfa UbW" ZbYk dfcYWbzh\Y dfcYWbzh\Y dfcYWbzh\Y Zcf'd`UbbYX [cu'"A cb]hcfYX Vi hbchYj u'i UhYX"
- YE FYdcffjb[ a Yth.cxc`c[ m:H\Y`bi a VYf`cZX]gfjbVti\ci gY\c`Xg`k ]th `Ub`YI ]thXUtY`k ]th\]b` th\Y`fYdcffndYf]cX`th\Un'UfY`U`gc`bctrVt/ffYbthm]b`th\Y`dfc^YVtiUnth\Y`YbX`cZth\Y`fYdcffndYf]cX"

#### , Ł Exited Households to PSH (#):

- UŁ **Di fdcgY**. \*DX]/WhYgʻj c`i a YʻcZ\ci gY\c`XgʻgYfj YXʻVmh\YʻdfcYVhik\]/W.'YI]hhc`
  DYfa UbYbhGi ddcfhjj Yʻ<ci g]b[ 'Xi f]b[ 'h\Y`fYdcfhdYf]cX"'H\]gʻa YUgi fYʻ]gʻa cb]hcfYX`
  Vi hbchYj Uʻi UhYX"'
- VŁ **Dfc.YVMg** Ci HYUVN Dfc[fUa g
- W. **8YZ|b]|r|cb.** Bi a VYfcZX]gr|bVbi\ci gY\c`Xg'h\UnYl]|hYX'h\Y'dfcYVbihc'dYfa UbYbh' qi ddcfr|jY`\ci q]b['Xi f]b['h\Y'fYdcfhdYf]cX'''
- XŁ; cu'!gYhilp['a Yh\cxc`c[m'A YYhcf'Yl WYX'df]cf'dYfZcfa UbW'"A cb]hcfYXžVi hbchi Yj U'i UhYX"
- YŁ **FYdcffjlb[ a Yth.cXc`c[ m**:H\Y bi a VYf cZX]gfjlbVfi\ci gY\c`Xg'k ]h\ Ub Yl ]hXUhY k ]h\]b h\Y fYdcfhdYf]cX h\UhUfY U'gc bchW ffYbhm]b h\Y dfc^YVfiUhh\Y YbX cZh\Y fYdcfhdYf]cX UbX h\Uh\Uj Y Ub YbffmXUhY ]bhc U'dYfa UbYbhgi ddcfhjj Y \ci g]b[ 'dfc^YVfi''



## - Ł Exit to Homelessness (%):

- UŁ **Di fdcgY**. '≢x]\WhYg'h\Y'dfc^Y\Myg'jo \WYgg']b'YbX]b['\ca Y`YggbYgg'Ug'a YUgi fYX'Vm h\cgY'k\c'fYh fb'hc'Ya Yf[Yb\Mng\Y`hYf'cf'h\Y'ghfYYhg"'5``ck Yf'fUhY']g'Wbg]XYfYX' dcg]hj Y"'
- VŁ **Dfc. YV Mg.** DY fa Ub Y b h Gi ddcfh j Y < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b [ 'Ub X 'H f Ub g ] h j c b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g U ` < ci g j b U ` < ci g j b U ` < ci g j b U ` < ci g j b
- VY 8YZID]Injcb. H\Y dYfWfbhcZ\ci gY\c`Xg`k\c`Xc bcha U]bHJ]b h\Y]f`\ci g]b[žk\Yh\Yf`cf` bchUg`dUfhcZh\Y`DYfa UbYbhGi ddcfn]j Y'<ci g]b[`cf`HfUbg]h]cbU`'<ci g]b[`dfcYVMz`UbX` fYh fb hc Ya Yf[YbWng\Y`hYf`cf`h\Y`ghfYYhg`k]h\]b % \$ XUng`cZYI]hZfca 'h\Y`dfcYVM''``</p>
- XŁ; **cU'!gYHjb['a Yh\cXc`c[m**'5hcf'VY`ck '7G6'6cUfX'9bXg'Dc`]Whcf``cWJ`'7c7'gHJbXUfXg''' 6UgYX'cb`\]ghcf]WJ`HYbXg'cf'UbHJWJdUhYX'dYfZcfa UbW'''
- YŁ **FYdcffjlo[ a Yth.cXc`c[ m**:H\Y bi a VYf`cZ\ci gY\c`Xg`k\c`Yl ]hth\Y dfcYVt/iUbX`Ybh\f` g\Y`h\f`cf`ghfYYhci hfYUW\k]h\]b`% \$`XUng`UZh\f`Yl ]hcf`Ug`cZXUh\CZfYdcfhžX]j ]XYX`Vm h\Y hchU`bi a VYf`cZX]gh]bVt/i\ci gY\c`Xg`gYfj YX`Xi f]b[ h\Y`fYdcfh]b[ 'dYf]cX. fkci gY\c`Xg`h\UhYl ]h\X`dfc^YVt/iUbX`Ybh\fYX`g\Y`h\f`cf`ghfYYhci hfYUW\k]h\]b`% \$`XUng\E#hchU`X]gh]bVt/i\ci gY\c`Xg`gYfj YX''

## ]k Bia YfUhcf

- (Ł GYa ]!Ubbi U`Wc\cfh 7U'Vi`UhY h\Y'bi a VYfcZX]gh]bVh\ci gY\c`Xg'h\Uh YI ]hYX'k ]h\ ]b'h\Y'dfYj ]ci g'gYa ]!Ubbi U`fYdcfhdYf]cX'UbX'YbhYfYX'g\Y`hYf cf`ghfYYhci hfYUW\k ]h\]b'% \$ XUng'UZhYfYI ]hcf'Ug'cZXUhY'cZfYdcfh''
- ) Ł 5bbi U`Wc\cfh`7UW`UhY`h\Y`bi a VYf`cZX]gh]bVb\ci gY\c`Xg`h\UhYI]hYX` k ]h\]b`h\Y`Z[fgh% \$`XUng`cZh\Y`Ubbi U`fYdcfhdYf]cX`UbX`YbhYfYX`g\Y`hYf`cf` ghfYYhci hYUW\k]h\]b`% \$`XUng`UZhYf`YI]hcf`Ug`cZXUhY`cZfYdcfh'

# ]]]k 8Ybca ]bUhcf

- (Ł GYa ]!Ubbi U`Wc\cfh`7U'W\`UhY`h\Y`bi a VYf`cZX]gh]bWi\ci gY\c`Xg`gYfj YX` k ]h\]b`h\Y`dfYj ]ci g`gYa ]!Ubbi U`fYdcfhdYf]cX"
- ) Ł 5bbi U`Wt\cfh.7UW\`UhY'h\Y'bi a VYf'cZX]gh]bWh\ci gY\c`Xg'gYfj YX'k]h\]b' h\Y'Z[fqh% \$'XUnqi'cZh\Y'Ubbi U`fYdcfhdYf]cX"'

#### %\LHouseholds Served (#):`

- UŁ **Di fdcgY**. ⊕X]/WhYgʻj c`i a YʻcZ\ci gY\c`XgʻgYfj YXʻVmh\Yʻdfc^YVM'': cfʻYa Yf[YbWh g\Y`hYfgžh\]gʻbi a VYfʻ]bX]/WhYgʻh\YʻYl hYbhhcʻk\]/W h\Yʻdfc^YWhgYfj YgʻUʻdfcdcfh]cbUʻg\UfYʻcZgnghYa ʻXYa UbX'': cfʻgi ddcfh]j Yʻ\ci g]b[žh\Yʻbi a VYfʻWcffY`UhYgʻhcʻVWdUW]/m UbXʻi b]hhi fbcj YfʻfUhYg''': cfʻU``ch\Yfʻdfc^YVMgžh\Yʻbi a VYfʻa YUgi fYgʻdfc^YVMi YZZIVIYbVM'i
- VŁ Dfc YVMg. 5"
- VYZIDINCO. HAY bi a VYf cZX]gh]bVM\ci gY\c`Xg'gYfj YX Vmh\Y dfc^YVMf]bWi X]b[ bYk UbX VVIffnci YfEXi f]b[ h\YfYdcfndYf]cX"
- XŁ; cu'!gYhijb['a Yh\cXc`c[m'A YYhcf'YI WYX`df]cf'dYfZcfa UbW''''=ZbYk 'dfc^YVbz´h\Y' dfc^YVbz´h\Y'Tuhcbu'Y'Zcf'd`UbbYX'[cu'''
  - ]Ł FUd]XFY!\ci g]b[ž<ca Y`YggbYgg DfYj Ybh]cbž6YbYZ]hg DUfhbYfg\]d UbX'Ci hfYUW\ Dfc[fUa g.

- fl/£ 5bbi U`dfc^YVMjcbg. 'VUgYX'cb'\]ghcf]VVI`HYbXg'UbX#cf'UbhjVMJUHYX' dYfZcfa UbVM'''''
  - fUL 7Uffncj Yf`\ci gY\c`Xg`UfY`h\cgY`Ybfc``YX`df]cf`hc`+#%#LL`UbX`Ubh]V]dUhYX`hc`VY`UVh]j Y`]b`h\Y`dfc^YVhUg`cZ+#%#LL"
  - fVLBYk dfc.YVNiYbhfUbhg.UfY.h\cgY\cigY\c`Xg.Ybfc``YX.cb.cf.UZhYf.+#%#LL"``fWLHchU``\cigY\c`Xg.UfY.h\Y.gi a `cZ.VVJffncj.Yf.d`i g.bYk dfc.YVNiYbhfUbhg"
- f&LGYa]!Ubbi U`UbX ei UfhYf mdfc YVMjcbg"
  - fluk 7Uffnæj Yf`\ci gY\c`Xg`UfY`h\cgY`UbHJVJdUhYX`hc`VY`UVMjj Y`]b`h\Y`dfc^YVMiUg`cZYbX`cZfYdcfhdYf]cX"'': cf`FUd]X`FY!\ci g]b[žh\]g`g\ci `X`VY`gYUgcbU``m UX^}ghYX"'
  - fVŁ BYk 'dfc'YVMYbIrfUblig'UfY IN.cgY \ci gY\c`Xg'Ybfc``YX'UZNYf'glUflicZfYdcfh' dYf]cX": cf'FUd]X'FY!\ci g]b[žh\]gg\ci `X'VY'gYUgcbU`mUX1 gNX"
  - fWL HchU \ci gY\c Xg UfY h\Y gi a cZVV/ffncj Yf d'i g bYk dfc YVV/YbhfUbhg"
- ]k 9a Yf[YbWhG\Y`hYf'UbX'7ccfX]bUhYX'Dc]bhcZ5WWgg.
  - f%2 5bbi U`dfc^YVMjcbg. 'VUgYX'cb'\]ghcf]WU`HYVbXg'UbX#cf'UbhjVMjdUhYX' dYfZcfa UbW'"'''
  - f&LGYa]!Ubbi U`UbX`ei UffYf`mdfcYVM]cbg. VUgYX`cb`Ubbi U`dfcYVM]cbg'UbX`UX^; ghYX`Zcf`Xi d`]VWh]cb`fWVffncj Yfg'UbX`fYV]X]j ]ghgL'''7Uffncj Yf`]g`VUgYX`cb`\UdUV]mh'`FYV]X]j ]ga `]g`VUgYX`cb`\]ghcf]VV`gnghYa `hfYbXg''5X^; ghZcf`gYUgcbU`]mn]ZUddfcdf]UhY"
- ]]]Ł DYfa UbYbhGi ddcfh]j Y <ci q]b[...
  - fl/k 5bbi U`dfcYVMjcb.`A i`hjd`mh\Y`dfcYVMvWdUVJmnVmh\Y`dfcYVMYX`Ubbi U`hi fbcj Yf`fUhY"''±0`a cghVWgYgžh\jg`dYfWbhU[Y`k]``VY`&\$i "'': cf`Yl Ua d`Yž]Z dfcYVMvWdUVJmnjg`&\$žh\Yb`Ubbi U`dfcYVMYX`\ci gY\c`Xg`gYfj YX`k ci `X`VY`&(`f&\$1`%'&1`&('L''
  - f&ŁGYa]!Ubbi U`dfcYWljcb. A i `hjd`mh\Y`dfcYWlWUUWjmnVmh\Y`dfcYWlYX`gYa]! Ubbi U`hi fbcj Yf`fUhY"'' +b`a cghWlgYgžh\]g`dYfWbhU[Y`k]``VY`%\$ı "'': cf` YI Ua d`Yž]ZdfcYVlnWUdUMjmjg`&\$žh\Yb`gYa]!Ubbi U`dfcYVlnYX`\ci gY\c`Xg` qYfj YX`k ci `X`VY`&&`f&\$1`%'%1`&&Ł"'
  - flłEi UfhYfmdfcYVMgcb. A i `h]d`mh\Y`dfcYVMVVdUVMmVmh\Y`dfcYVMYX`ei UfhYfm hi fbcj YffUhY"" = b`a cghVVgYgžh\]g'dYfWfbhU[Y`k]``VY`) ı "'': cfYl Ua d`Yž]Z dfcYVMVVdUWMm]g'&\$žh\Yb`ei UfhYfmdfcYVMYX`\ci gY\c`Xg'gYfj YX`k ci `X`VY` &%f&\$1`%"\$) 1`&%2""
- ]j Ł HfUbg]hjcb Dfc^YVhiUbX HfUbg]hjcbU`<ci g]b[...
  - f%£5bbi U`dfcYVMjcbg. VUgYX`cb`\]ghcf]VVJ`HYbXgžUbh]VNjdUhYX`dYfZcfa UbVN'ž UbX#cf'Uj U]`UV`Y`Z bXg''``
  - f&k GYa ]!Ubbi U`UbX`ei UfhYf`mdfc^YWfjcbg.cbY!\U`ZUbX`cbY!ei UfhYf`cZh\Y`Ubbi U` dfc^YWfjcbzfYgdYWfj Y`m'5`hYfbUhj Y`nxih\Y`dfc^YWfjcb`a UmVY`VUgYX`cb` \]ghcf]WU`HYbXg`Zcf`h\Y`gYa ]!Ubbi U`UbX`ei UfhYf`mfYdcfhdYf]cXg''''
- YŁ **FYdcffjlo[ a Yf\cXc`c[ m**;H\Y bi a VYf cZX]gfjlbVfi\ci gY\c`Xg`gYfj YX Vmf\Y dfc^YVfi Xi f]lb[ h\Y fYdcfhdYf]cX"8]gfjlbVfi\ci gY\c`Xg`gYfj YX UfY ]XYbfjZ]YX Vmf\Y]f``Ugh gYfj ]W fYVffX Zcf h\Y dfc^YVfiYbhYfYX ]bhc 7GD Ug`cZh\Y YbX cZh\Y fYdcfhdYf]cX"



Note that clients served equals households served for Permanent Supportive Housing (with the exception of projects that serve families).

## % Housing Affordability at Exit (%):

- UŁ **Di fdcgY**. \*\DX]\WhYg'h\Uhh\Y'dfc\Y\Mi]g'Ugg]gh]b[ \ci gY\c`Xg'hc`cVhU]b'gi \\Z]\V]\Ybh ]b\Wa Y'hc`UhhU]b'UbX'a U]b\UbX'a U\UbX'a U]b\UbX'a U]b\UbX'a U]b\UbX'a U U\UbX'a U]b\UbX'a U\UbX'a U U\UbX'a U\UbX'
- VŁ **Dfc^YVMg.** FUd]X.FY!\ci g]b[ fl.Ua ] mdfc^YVMg.cb`nhz\*DYfa UbYbh'Gi ddcfh'jj Y'<ci g]b[ ž UbX'<ca Y`YggbYgg'DfYj Ybh'jcb'
- VY 8YZID]HJcb. H\Y'dYfWfbHJ[Y'cZX]gHJbWf\cigY\c`Xg'H\Uh'YI]HYX'H\Y'dfcYWfgi WWggZi ``m Xi f]b['H\Y'fYdcfhdYf]cX'k]H\'U'\ci g]b['WcghH\Uh'XcYgbNfhYI WYYX') \$1 'cZH\Y'\ci gY\c`XNfj']bWca Y'''
- XŁ; c**U'!gYHj|b['a Yh\cXc`c[m**'A YYhcf'Yl WYX'7G6'6cUfX'9bXg'Dc`]Wh'A cb]hcfYX'Vi hbchi Yi U'i UhYX'''
- YŁ FYdcfhjb[ a Yh\cXc\c[m"

GhYd % 8YhYfa ]bY h\Y bi a VYf cZ\ci gY\c`Xg h\UhYl ]hYX h\Y dfc YVbik ]h\ U gi VWyggZ ``\ci g]b[ ci hWta Y Xi f]b[ h\Y fYdcfh]b[ dYf]cX"

GhYd'&::cf'YUW\`\cigY\c`XžVVIVV\`UhYth\Y'dYfWfbhcZ\cigY\c`X`]bV&a Y`gdYbhcb'\cig]b[`fUbX`i hj`]njYgž]ZfY`Yj UbhEVmX]j ]X]b[`h\Y`\cigY\c`Xf\y\V&ghcZfYbhfUbX`i hj`]njYg`Zcf'DfYj Ybhjcb'UbX`FUd]X`FY!\cig]b[EUhYI]hk]h\'h\Y`\cigY\c`Xf\y]bV&a Y`UhYI]h'\'GhYd''..'7ci bhh\Y`bi a VYf`cZ\cigY\c`Xg'h\UhgdYbX') \$i `cf'`Ygg`cZh\Y]f`]bV&a Y`cb'\cig]b[`UbX`i hj`]njYg''

GhYd'(.'8]j]XY'h\Y'bi a VYf']b'GhYd'' 'Vm'h\Y'bi a VYf'cZgi WWggZi``\ci g]b['Yl]hg']b' GhYd'%''

## % Housing Stability (Months):

- UŁ **Di fdcgY**. ≠x]/WhYg h\Y dfc YWhygi WWgg ]b YbX]b[ \ca Y`YggbYgg Ugʻa YUgi fYX`Vm `Yb[h\ cZh]a Y`h\Undfc YWhdUfh]WdUbhg fYhU]b dYfa UbYbhgi ddcfh]j Y`\ci g]b[ cf` hfUbg]h]cbU`\ci g]b[ "5``cb[ Yf`fUhY`]g`[ YbYfU`mWebg]XYfYX`dcg]h]j Y`Zcf`dYfa UbYbh gi ddcfh]j Y`\ci g]b[ "
- VŁ **Dfc^YV/fg.** DYfa UbYbhGi ddcfhjj Y <ci gjb[ 'UbX HfUbg]hjcbU <ci gjb[ '
- VY. 8YZ|b]h]cb. H\Y'Uj YfU[Y`Yb[h\cZh]a Yža YUgi fYX']b a cbh\gžh\UnX]gh]bWf\ci gY\c`Xg` fYg]XY']b h\Y'DYfa UbYbhGi ddcfh]j Y'<ci g]b['cf'h\Y'HfUbg]h]cbU`'<ci g]b['i b]hZfca Ybhfmhc Yl ]hcf'YbX'cZfYdcfhdYf]cX"''</p>
- XL; cU'!gYhhjb['a Yh\cXc`c[m''
  - ]Ł DYfa UbYbhGi ddcfh]j Y'<ci g]b[. 'A YYhcf'Yl WYXX7G6'6cUfX'9bXg'Dc`]Whcf'`cVW'' 7c7'ghUbXUfXg/VUgYX'cb'\]ghcf]VW''HYbXg'cf'Ubh]V\\dUhYX'dYf\overline{Z}cfa Ub\W''''
  - ]]Ł HfUbg]hjcbU`<ci g]b[.`A YYhcfYl WYX``cW\`7c7`ghUbXUfXg/VUgYX`cb`\]ghcf])W\` hfYbXqz\UbhjWldUhYX`dYfZcfa UbW\z\UbX`dfc\YVhiXYq][b"
- YŁ FYdcffjlo['a Yh\cXc`c[m'A YUgi fYX'i g]b['h\Y'Uj YfU[Y'\ci gY\c`X'`Yb[h\cZghUm']b'
  XUngifZfca 'Ybhfmhc'Yl]hXUhY'cf'YbX'cZfYdcfhdYf]cXz']Zgh]``'U'fYg]XYbhŁX]j ]XYX'Vmh\Y'
  Uj YfU[Y'XUngidYf'a cbh\fl \$") 'XUnguŁ"'A YUgi fY']g'bchVVVVV'UhYX'Zcf'h\cgY'dfc'YVVg'
  i bXYf[c]b[']b]hJU'cf'YldUbg]cb``YUgY'i d"''

GhYd'% '7U'W' UhY h\Y hchU`XUng'h\UhYUW\\`\ci gY\c`X'k Ug'\ci gYX'Vmgi VhfUWf]b['h\Y' 9bhm8UhYzfca 'h\Y'9l]h8UhYcfYbXcZfYdcfhdYf]cX'Zcf'U``fYWtfXg''`
GhYd'& '8YhYfa]bY'h\Y'Uj YfU[Y``Yb[h\czghUmZcf'U``h\Y'\ci gY\c`Xg'VmX]j]X]b['h\Y'gi a 'cZhchU`XUng'\ci gYX'Vmh\Y'bi a VYfcZX]gh]bVth\ci gY\c`Xg'gYfj YX''
GhYd'' . '8]j]XY'h\Y'Uj YfU[Y``Yb[h\czghUmVm' \$") žk\]W\]g'h\Y'Uj YfU[Y``bi a VYfcZ` XUng']b'U'a cbh\"

## % Uncrease in income from employment, from entry to exit or end of reporting period (%):

- UŁ **Di fdcgY.** Di fdcgY. Di Yadro YVM gg i WYgg i Uggjghjb [ \ci gY\c`XghccVhU]b Yadrona Ybh]b WtaY"5\] [\YffUhY]g Wtbg]XYfYX dcg]hj Y"
- VŁ **Dfc^YVMg**, DYfa UbYbhGi ddcfh]j Y < ci g]b[žHfUbg]h]cbU < ci g]b[žUbX HG5 >cV&< ci g]b[
- WŁ **8YZID]Hjcb.** HAY dYfWIDHU[Y cZUXi `hg k \c']bWfYUgY ]bWta Y Zfca 'Ya d`cna YbhZfca Ybhfmhc Yl ]hcf UhihAY YbX cZfYdcfhlb[ 'dYf]cX ]ZbchYl ]hYX'''
- XŁ; cu'!gYhnjb[ a Yh\cXc'c[m'A YYhcfYl WYX`cVU`7c7 ghubXufXg''
- YŁ FYdcfhlb[ a Yh\cXc`c[m"
  - JŁ DYfa UbYbhGi ddcfnjj Y <ci gjb[. H\Y bi a VYf cZUXi `hg gYfj YX Xi f]b[ 'h\Y fYdcfn dYf]cX k \c \UX Ub jbVfYUgY jb h\Y]f Ya d`cna Ybh jbVta Y Ua ci bh Zfca Ybhfmhc YI jhftf Uhih\Y YbX cZfYdcfnjb[ 'dYf]cXz jZbchYI jhYX Zfca 'h\Y dfc YVfhzXj j JXYX Vmh\Y hchU bi a VYf cZUXi `hg gYfj YX Xi f]b[ 'h\Y fYdcfndYf]cX" \delta Vta Y 'gci fWfg jbWi XY cb`mYa d`cna Ybh]bVta Y"</p>
  - ]]Ł HfUbg]h]cbU`<ci g]b['UbX'HG5'>cV&<ci g]b[.'H\Y'bi a VYf'cZUXi `hg'YI]hYX'Xi f]b['h\Y'fYdcfhdYf]cX'k \c'\UX'Ub']bWfYUgY']b'h\Y]f'Ya d`cna Ybh]bWta Y'Ua ci bhZfca Ybhfmhc'YI]hX]j ]XYX'Vmh\Y'hchU`bi a VYf'cZUXi `hg'YI]hYX'Xi f]b['h\Y'fYdcfhdYf]cX'''

    ±bWta Y'gci fWfg']bWi XY'cb`mYa d`cna Ybh]bWta Y''''
    - Note: Deceased households are not included in the count of households served. ...

# %( \Lincrease in cash income, other than employment, from entry to exit or end of reporting period (%):

- UŁ **Di fdcgY**. ±x]/WhYgidfcYVhNygi WWyggi]b Ugg]gh]b[ \ci gY\c`Xg`hc`cVhU]b`]bWta Y"'5`\][\Yf`fUhY`]g`Wtbg]XYfYX`dcg]h]j Y"''
- VŁ **Dfc:YVMg.** 'DYfa UbYbh'Gi ddcfh]j Y'<ci g]b[ž'HfUbg]h]cbU''<ci g]b[ž'UbX'HG5'xcV&<ci g]b['
- W. 8YZIb]Injcb. H\Y dYfWfbHU[Y cZUXi `hg`k \c]bWfYUgY]bWta Y Zfca 'gci fWfg ch\Yf'h\Ub' Ya d`cna YbhZfca 'Yblfmhc Yl]hcf'Uhlh\Y YbX cZfYdcfh]b[ 'dYf]cX]ZbchYl]hYX"
- XŁ; cu'!gYhnjb[ a Yh\cXc'c[m'A YYhcf'Yl WYXX'cVW'7c7 ghubXufXg"
- YŁ FYdcfhjb[ a Yh\cXc\c[m]
  - ]Ł DYfa UbYbhGi ddcfhjj Y'<ci g]b[. 'H\Y' bi a VYfcZUXi `hgʻgYfj YX'Xi f]b[ 'h\Y'fYdcfh dYf]cX'k\c'\UX'Ub']bVfYUgY']b'h\Y]f hchU' ]bWta Y'Ua ci bhZfca 'Ybhfmhc'Yl ]hftcf'Uh h\Y'YbX'cZfYdcfh]b[ 'dYf]cXž]ZbchYl ]hYX'Zfca 'h\Y'dfc'YWhZYl Wl X]b[ 'Ya d`cma Ybh ]bWta YžX]j ]XYX'Vmh\Y'hchU` bi a VYfcZUXi `hgʻgYfj YX'Xi f]b[ 'h\Y'fYdcfhdYf]cX'' +bWta Y'gci fWrg'Yl Wl XY'Ya d`cma YbhžVi ha Um]bWl XY'Wlg\ VYbYZ]hgʻUbX#cf'ch\Yfgci fWrg'''



JE HfUbg]h]cbU`<ci g]b['UbX'HG5'>cV&<ci g]b[.'H\Y'bi a VYf'cZUXi `hg'YI]hYX'Xi f]b['h\Y'fYdcfhdYf]cX'k \c'\UX'Ub']bWfYUgY']b'h\Y]f'hchU']bWta Y'Ua ci bhZfca 'Ybhfmhc' YI]hžYI WI X]b['Ya d`cna Ybh]bWta YžX]j ]XYX'Vmh\Y'hchU' bi a VYf'cZUXi `hg'YI]hYX' Xi f]b['h\Y'fYdcfhdYf]cX"'=bWta Y'gci fWfg'YI WI XY'Ya d`cna YbhžVi ha Um]bWi XY' WUg\'VYbYZ]hg'UbX#cf'ch\Yf'gci fWfg'''</p>

Note: Deceased households are not included in the count of households served. ...

## %\* LMovement (%):

- UŁ **Di fdcgY.** "±x]/WhYg h\YYI hYbhhc k\]W\Ya Yf[YbWhg\Y`hYf W]Ybhg UfY a ][fUh]b[ 'Zfca ' cbY g\Y`hYf dfc YVMhc Ubch\Yf" 5 `ck Yf fUhY ]g Wbg]XYfYX dcg]hj Y"
- VŁ **Dfc YVMg**, G]b[ Y 5Xi `h'UbX: Ua ] mG\Y`hYfg UbX FUd]X FY!\ci g]b[ Zcf g]b[ Y UXi `hg'
- VY 8YZ|b]hcb. "A cj Ya Ybha YUgi fYg'X]gh]bWf\ci gY\c`Xg'h\UhYl]hU'g]b[`Y'UXi `hcf'ZUa ]m g\Y'hYf'Xi f]b['h\Y'yj U'i Uh]cb'dYf]cX'UbX'h\Yb'\Uj Y'WbhUWfik ]h\ 'Ubch\Yf'g\Y'hYf' k ]h\]b gYj Yb XUng'cZYl ]h''H\Y'a cj Ya YbhfUhY ]g'a YUgi fYX'VmX]j ]X]b['h\Y'hchU'' X]gh]bWf\ci gY\c`Xg'h\UhYl dYf]YbWf'a cj Ya YbhVmh\Y'hchU''X]gh]bWf\ci gY\c`X'Yl ]hg' Xi f]b['h\Y'j U'i Uh]cb'dYf]cX'ffY'Uh]j Y'hc'h\Y'dfc'YWfih\UhgYf] YX'h\Ya Ł''
- XŁ; cu'!gYhjb['a Yh\cXc'c[m'5hcf'VY'ck '7G6'6cUfX'9bXg'Dc']Wh'A cb]hcfYX'Vi hbch' Yi Ui UhYX'''

# YŁ FYdcfhjb[ a Yh\cXc`c[m

- i) 9a Yf[YbWrG\Y`hYfg. H\Y`bi a VYf`cZhchU``X]gh]bWr\ci gY\c`Xg`h\UhYl dYf]YbWr a cj Ya Ybhk ]h\]b`+ XUng;#'h\Y`bi a VYf`cZhchU``X]gh]bWr\ci gY\c`X'Yl ]hg`Zcf`h\Y`fYgdYVMj Y`dfcYVMXi f]b['h\Y`fYdcfhdYf]cX"`Note: Measure excludes exit from Maryhaven-Safety and Overflow shelters, and exit to Maryhaven-Safety from Single Adult shelters.
- ii) FUd]XFY!\ci g]b['Zcf'g]b['Y'UXi `hg. H\Y'bi a VYf'cZhcHU'X]gh]bWi\ci gY\c`Xg'h\Uh Yl ]hYX'g\Y'hYf'UbX'k YfY gYfj YX'Vmh\Y'FUd]X'FY!\ci g]b['Zcf'g]b['Y'UXi `hg'dfc[fUa Xi f]b['h\Y'fYdcfh]b['dYf]cX'UbX'Yl dYf]YbWX'a cj Ya Ybhk ]h\]b' + 'XUng'#'h\Y' bi a VYf'cZhcHU'X]gh]bWi\ci gY\c`X'h\UhYl ]hYX'g\Y'hYf'UbX'k YfY'gYfj YX'Vmh\Y'FUd]X'FY!\ci g]b['Zcf'g]b['Y'UXi `hg'dfc[fUa Xi f]b['h\Y'fYdcfhdYf]cX'''Note: Measure excludes exit from Maryhaven-Safety and Overflow shelters, and exit to Maryhaven-Safety from Single Adult shelters.

#### %+LNegative Reason for Leaving (%):

- UŁ **Di fdcgY.** '5'`ck 'fUhY'cZbY[Uh]j Y'fYUgcbg']bX]VVIhYg'h\Y'dfcYVMfg'gi VWYgg']b'ghUV]`]n]b[' U`\ci gY\c`X']b'\ci g]b['''
- VŁ **Dfc. YV Mg.** "DY fa Ub Ybh Gi ddcfh]j Y' < ci g]b[ "Ub X'H f Ub g]h]cb U' < ci g]b[""
- VY. 8YZJb]h]cb. H\Y'dYfWfbHJ[Y'cZ\ci gY\c`Xg'h\Uh`YUj Y'\ci g]b['Xi Y'hc'bcb!Wta d`]UbW' cf'X]qJ[fYYa Ybhk ]h\'h\Y'\ci q]b['fi 'Yq''
- XŁ; cu'!gYH]b[aYhkcXc`c[mAYYhcfVY`ck`cVV)~7c7gHubXUfXg"
- YŁ FYdcffjb[ a Yth.cxc'c[m'H\Y'bi a VYf'cZYI]hYX'\ci gY\c`Xg'Xi f]b[ th\Y'fYdcfhdYf]cX' k\c'\Uj YÎbcb!Wta d`]UbW'k]h\dfcYVM cfÎX]gU[fYYa Ybhk]h\fi `Yg#dYfgcbï Ug'h\Y]f FYUgcb Zcf@/Uj ]b[ th\Y'dfcYVMX]j ]XYX Vmth\Y hchU' bi a VYf'cZ\ci gY\c`Xg'h\UhYI]hYX Xi f]b[ th\Y'fYdcfhdYf]cX"Note: Deceased households are not included in the count of households exited."

## % ŁNew Households Served (#):

- UŁ **Di fdcgY**. ≠DX]WUHYg H\Y j c`i a Y cZbYk `\ci gY\c`Xg gYfj YX VmH\Y dfc YWbzk\]W. ]g` Wbg]XYfYX hc a YUgi fY dfc YWbYZ]WYbWH'i
- VŁ **Dfc.YVMg.** F.Ud.]X.F.Y.!\ci g.]b.[ z̄<ca Y.YggbYgg DfYj Ybh]cbzGGJ: 'Dfc.YVMgz6YbYZ]hg' DUfhbYfg\]dzUbX.Ci hYUW. Dfc[fUa g'</p>
- WE 8YZ|b]hcb. Bi a VYfcZX]ghbWt\ci gY\c`Xg'h\UhYbhYfYX'h\Y'dfcYWtXi f]b['h\Y'fYdcfh'dYf]cX'h\UhkYfY'bchfYWY]j ]b['gYfj ]Wgcb'h\Y``UghXUmcZh\Y'df]cf'fYdcfhdYf]cX''
- XŁ; cU!gYHn]b['a Yh\cXc`c[m'A YYhcf'YI WYX df]cf'dYfZcfa UbW" ZbYk 'dfcYVbzh\Y' dfcYVbzh\Y' [cU'"
- YŁ FYdcffjb[ a Yth.cXc`c[miH\Y bi a VYf`cZX]gtjbVtfi\ci gY\c`Xg`k]th. Ub YbtfmXUtY th.Uh cWV fg`VYtk YYb th.Y gtUfhUbX YbX XUtYg`cZth.Y fYdcffidYf]cX`UbX th.Uhk YfY bchU`gc`]b`th.Y`dfc^YVtfUg`cZth.Y`gtUfhXUmcZth.Y`fYdcffijb[ dYf]cX"

## % ŁPassed Project Certification:

- UŁ **Di fdcgY.** ±x]/WhYg'h, Y'dfc YVMnyg'i WY'gg']b YbX]b[ '\ca Y'YggbYggž'UV]`]hmhc'dfcj ]XY' fYgci fWg'UbX'gYfj ]W'g'hc'\ca Y'Ygg'dYfgcbgž'UbX'UWN'gg'UbX'WcfX]bUh]cb'hc' Wta a i b]hmfYqci fW'g'UbX'qYfj ]W'qž'Ug'bYYXYX'''
- VŁ **Dfc:YVkg**, '5'`
- VYZ 8YZJb]hjcb. Dfc:YVMiUX\YfYg:hc:U`:'Udd`]WUV`Y:ghUbXUfXgž:Ug:XYgWf]VYX:]b:h\Y:7G6: 5Xa ]b]ghfUhji Y:UbX:Dfc:YVMiGhUbXUfXg"
- XL; cU'!gYhf]b[ a Yh\cXc\c[mB#5"
- YŁ **FYdcffjb[ a Yh\cXc`c[m**:7i ffYbhDfc^YVhFYj ]Yk UbX 7YffjZJVVhjcb FYdcfh'

#### &\$\perpropert Occupancy Rate (%):

- [Ł **Dfc^YMg.** G]b[`Y'5Xi`hG\Y`HYfgžDYfa UbYbhGi ddcfh]j Y'<ci g]b[ž'UbX'HfUbg]h]cbU'' <ci g]b["Bcha YUgi fYX'Zcf'A Ufm\Uj Yb'9b[U[Ya Ybh7YbHYf'!'GUZYhn\u)cj YfZck' G\Y`HYfg\u)UbX': Ua ]`mG\Y`HYfg"

#### \Ł 8YZ[b]hcb."

- i) 9a Yf[YbWrG\Y`HYf. 5 dYfWrbHJ[Y H\UhfYZYWrg'H\Y`Uj YfU[Y'bi a VYf'cZ\ci gY\c`Xg' H\UhgHJnYX']b YUW\Ya Yf[YbWrg\Y`HYf'dYf'b][\hXi f]b[ 'H\Y'fYdcfhdYf]cX'fY`Uhjj Y' hc'h\Y Ya Yf[YbWrg\Y`HYff@rdfc'YWrWdUW]m'' Note: cumulative total is used for households with multiple instances of service during the report period"
- ii) DYfa UbYbh'Gi ddcfnjj Y'<ci g]b['UbX'HfUbg]njcbU'<ci g]b[.'5'dYfWfbhU[Y'h\Uh' fYZYVMg'h\Y'Uj YfU[Y'bi a VYf'cZ\ci gY\c`Xg'fYg]X]b[']b'U'dfc'YVMdYf'b][\hfY`Unjj Y'hc'h\Y'dfc'YWnVUdUWm''''</p>
- JŁ; cU!gYH]b['a YhcXc`c[m:A YYhcf'Y| WYX:7G6'6cUfX'9bXg'Dc`]Wtă`cWU'7c7'gHUbXUfXgzcf'df]cf'dYfZcfa UbW'''=ZbYk 'dfcYVthzh\Y'dfcYVtha i ghdfcj]XY'h\Y'fUh]cbU'Y'Zcf'd`UbbYX'[cU'z]bWi X]b['qHUfHi d'''



- \*E FYdcffjb[ a Yh\cXc`c[mHcHU`\ci gY\c`X`i b]hg`cZgYfj ]W' dfcj ]XYX`Xi f]b[ h\Y`fYdcfh dYf]cX`X]j ]XYX`Vmh\Y`hcHU`XUng`k ]h\]b h\Y`fYdcfhdYf]cX`X]j ]XYX`Vmh\Y`hcHU`dfc^YWf WdUVJhm'A YUgi fY ]g'a cb]hcfYXžVi hbchYj U'i UhYXžZcf`bYk dfc^YVMg`Xi f]b[ `ghUfHi d"``
  - i) 9a Yf[YbWhG\Y`hYf.
    - fl/L Project Occupancy Number: HchU`VYX`]ghg\Y`hYf'i b]hg Zfca 'h\Y`6YX`]ghFYdcfhi cf'Ci hWta YgFYdcfhiZcf'h\Y fYdcfhidYf]cX # hchU`XUngXi f|b[ 'h\Y`fYdcfhidYf]cX"
    - f&L Rate: Dfc YVIric WV dUb Wribi a VYf X]j JXYX Vmh Y dfc YVIriv Wdu Vjmi
  - ii) DYfa UbYbhGi ddcfhj Y <ci g]b[ UbX HfUbg]hjcbU` <ci g]b[...
    - fly Project Occupancy Number. 3 fly ]hXUhY cf YbX cZfYdcfhdYf]cX YblfmXUhY cf YV[]bb]b[ cZfYdcfhdYf]cXŁŽ %Ł#XUnq ]b fYdcfhdYf]cX"
    - f&L Rate: Dfc YVMicWV dUbWhbi a VYf ffci bXYX hc bYUfYghik \c Y bi a VYfLX]j ]XYX Vmh\Y dfc YVMiVVdUWhm

## &%LRecidivism (%):

- ZŁ DifdcgY. ≠x]WlhYgʻh\Y'dfcYVMỹgʻi WWggʻ]b`YbX]b['\ca Y`YggbYggʻUgʻa YUgi fYX`Vm bi a VYf`cZ\ci gY\c`Xgʻk\c`UhhU]b`\ci g]b['UbX`Xc`bchfYhi fb`hc`\ca Y`YggbYggʻ gi VgYei Ybhhc`h\Y`gi WWggZi`\ci g]b['ci hWta Y"5``ck Yf`fUhY`]g`Wtbg]XYfYX'dcg]hjj Y"
- [Ł **Dfc:YWg.** '5``YI Wdh'Cj YfZck 'G\Y`hYfgž'DYfa UbYbh'Gi ddcfh**j**j Y`<ci g]b[ž'UbX` HfUbg]h**j**cbU`'<ci g]b[

# \Ł 8YZb]hcb."

- ]Ł:cf'U``dfc'YV#g'YI WYdh<ca Y`YggbYgg'DfYj Ybh]cbžh\Y hchU`bi a VYfcZX]gh]bV#i\ci gY\c`Xg'h\Unk YfY'YI ]hYX'Xi f]b['h\Y'fY'Yj UbhfYdcfhdYf]cX'k ]h\'U'gi \WY'ggZi``\ci g]b['ci h\#a Y`fUg'XYZ]bYX'Zcf'h\Undfc'YV#L'UbX'\UX'Ubmg\Y`hYfcf'ghfYYh ci hfYUV\\WbhU\#ik ]h\]b % \$ XUng'cZh\Y'gi \WY'ggZi``\ci g]b['ci h\#a Y'''H\]g' a YUgi fY']g'YI dfYggYX'Ug'U'dYfWbhU[Y'cZhchU`X]gh]bV#i\ci gY\c`Xg'k ]h\'Ub'YI ]hhc'\ci g]b['fUg'XYZ]bYX'Zcf'h\Undfc'Y\#L'''
- ]]Ł:cfh\Y`<ca Y`YggbYgg`DfYj Ybh]cb'dfcYVt/gžh\Y`bi a VYfcZYI]hYX`\ci gY\c`Xg`k]h\`Ugi WWggZ``\ci g]b['ci hWta Y`flug`XYZ]bYX`Zcfh\UhdfcYVMzh\Uh`\Uj Y`Ubmg\Y`hYfcfghfYYhci hfYUW\WtbhUMik]h\]b"\*) `XUng`cZU'gi WWggZ``\ci g]b['ci hWta Yž Yl dfYggYX`Ug'U'dYfWbhU[Y'cZhchU`X]gh]bVti\ci gY\c`Xg`k]h\`Ub`Yl]hhc`\ci g]b['flug`XYZ]bYX`Zcfh\UhdfcYVMz"
- ]Ł; cU!gYH]b['a Yh\cXc`c[m'A YYhcf'VY`ck '7G6'6cUfX'9bXg'Dc`]Whcf'df]cf' dYfZcfa UbW'''
- L FYdcffjb['a Yh\cXc`c[m':5'dYfWbHU[Y'fUhY'fYZYVM]b['h\Y'bi a VYf'cZfYV]X]j ]gh \ci gY\c`Xg']b'U'dfc'YVMfY`Uhjj Y'hc'h\Y'bi a VYf'cZ\ci gY\c`Xg'h\UhYI]hYX'h\Y'dfc'YVM k]h\U'gi WW'ggZ\``\ci g]b['ci hWta Y'fgdYV]Z]Whc'h\Uhdfc'YVMz'': cf'Ci hYVW\Dfc[fUa g'\ci gY\c`Xg'k]h\YI]hg'hc'Ya Yf[YbWmg\Y'hYf'UfY'YI WI XYX'Zfca 'h\Y'WU'W'`Uhjcb''
  FYV]X]j ]ga 'fUhY']g'WU'W'`UhYX'ei UffhYfmcb`mZcf'Ya Yf[YbWmg\Y'hYfg''
  - IŁ FUNY 1 flbi a YfUncf#XYbca IbUncfleT %\$\$
  - ]]Ł 8Ybca ]bUhcf. '7c\cfhcZ\ci gY\c`Xg'k\]M\'UhtU]bYX'U'gi WWggZi `'\ci g]b[' ci hWta Y"''
    - fl/k GYa ]!Ubbi U`Wt\cfh`'7U'Wl`UhY'h\Y'bi a VYfcZX]gh]bVh/ci gY\c`Xg'k ]h\'U' gi Wn/ggZ``\ci g]b[ ci h/ka Y'k ]h\]b h\Y'dfYj ]ci g'gYa ]!Ubbi U`fYdcfhdYf]cX''

- f&L 5bbi U`Wc\cfh`7UW`UhY`h\Y`bi a VYf`cZX]gh]bWn\ci gY\c`Xg`k]h\`U`gi WWggZ\``\ci g]b[`ci hWa Y`k]h\]b`h\Y`Z]fgh% \$ XUng`cZh\Y`Ubbi U`fYdcfhdYf]cX"
- ]]]k BiaYfUhcf. BiaVYfcZfYV[[X]j]ghgZfcah\YUVcjYWt\cfh
  - fl/k\_5·fYVIj/K]j ]gh\ci gY\c`X`]gXYZ]bYX`Ug`U`X]gh]bVh\ci gY\c`X`Zfca 'h\Y`Wt\cfh XYZ]bYX`]b`f]]k:h\Un'Ybh\fg'h\Y`Ya Yf[YbWng\Y`h\f`cf`ghfYYhci hfYUW\gngh\a g` k]h\]b`% \$`XUng`UZh\f`YI]nZfca 'h\Y`dfc\YVh''`
  - f&L: cf'h\Y'<ca Y`YggbYgg'DfYj Ybh]cb'dfc'YVhg'h\Y'h]a Y`fUb[Y'UVcj Y']g'fYd`UW'X' Vm' \*) 'XUng'''

#### &&ŁSuccessful Diversion Outcome (# and %):"

- UŁ **Di fdcgY**. "≢x]\WhYg'h\Y'dfc\YVMyg'gi \WYgg']b YbX]b[ '\ca Y`YggbYgg'Vm`]b\_]b[ '\ci gY\c`Xg'hc`Uddfcdf]UhY'Wa a i b]hmfYgci fWg'UbX'bchUXa ]hh]b[ 'h\Ya ']bhc'g\Y`hYf'' 5`\][\Yf'bi a VYf'UbX'fUhY'UfY'Wabq]XYfYX'dcq]hj Y'''
- VŁ Dfc YVMg, 7ccfX]bUhYX Dc]bhcZ5WNgg fdl\cbY UbX ZJWY!hc!ZJWYŁ
- WŁ 8YZJD]Hjcb. H\Y bi a VYf cZX]gh]bWi\ci gY\c`X WbhUWifYgc`i h]cbg Zfca 'h\Y 7ccfX]bUhYX Dc]bhcZ5WWgg Xi f]b[ 'h\Y fYdcfhdYf]cX h\UhUfY WUgg]Z]YX Ug X]j YfhYX hc ch\Yf Wta a i b]hmfYgci fWgžUbX h\Y dYfWbhU[ Y cZh\Y hchU`X]gh]bWi\ci gY\c`X WbhUWifYgc`i h]cbg Zfca 'h\Y 7ccfX]bUhYX Dc]bhcZ5WWgg h\]g bi a VYf fYdfYgYbhg"
- XŁ; cu'!gYhjb[ a Yh.cxc'c[mA YYhcfYl WYX 7G6 6cufX 9bXg Dc']Wh
- YŁ FYdcfijo a Yth cxc c m 70 W UhY h Y hchu bi a VYf cZX]ghjo Wi ci gY c X W bhu w fygc i hjcbg h Uhh Y 7 ccfx]b UhYX Dc]bhc Z 5 W gg f Y W f X X X i f]b [ h Y f Y dcfhd Y f]c X UbX h Y hchu bi a VYf c Zh YgY h Uh Uf Y W bg]XY f Y X gi W gg Z `X]j Y f g]c bg K \ Y b U \ci gY\c X \ Ug a i hd Y W bhu w gz Y U X X ]ghjb W f Ygc i hcb had Y k ] `VY W i bh Y X cb W " 8]j ] X Y h Y bi a V Y f c Z X ]ghjb W f y gg Z `X]j Y f g]c b ci h W a Y g V m h Y bi a V Y f c Z hchu X ]ghjb W i\ci gY\c X W bhu w f Y gc i h c g Y V f X Y X V bhu w f Y gg X i f]b [ h Y f Y dc f h d Y f ] c Interrupted / incomplete calls are not included in the count of household contact resolutions."
- &' LSuccessful Housing Exit (%): FYZYf'hc 'HUV'Y' %'UbX'HUV'Y' & 'Zcf'U'Wta d'YhY'`]ghcZ\ci g]b[' ci hWta Yg"
  - Ze Di fdcgY. "=bX]/WhYg'h\Y'dfcYVM\fg'gi WWgg']b'YbX]b[ \ca Y'YggbYgg'Ug'a YUgi fYX'Vm h\cgY'k\c'UhtU]b'dYfa UbYbh\fz]bXYdYbXYbh\ci g]b[ "'5'\][ \Yf'bi a VYf'UbX'fUhY'UfY' W\fbg]XYfYX'dcg]h]j Y"'
  - [Ł **Dfc^YVMg**, 'DYfa UbYbhGi ddcfh]j Y <ci g]b[ '
  - \Ł **8YZ|b]h]cb.** 5a cb[ 'X]gh]bWh\ci gY\c`X'YI]hgžh\Y'dYfWbHJ[Y'cZh\Un'YI]hh\Y'dfc^YWhZcf' ch\Yf'dYfa UbYbh\ci g]b[ 'flUg'XYZ]bYX']b'HUV'Y'%2''''
  - ]Ł ; cU'!gYhhjb[ a Yh\cXc`c[m'A YYhcf'Yl WYX df]cf'dYfZcfa UbW'''
  - \*E FYdcffjb[ a Yh\cXc`c[mH\Y hchU` bi a VYf`cZX]gh]bVh\ci gY\c`XYI ]hg`Xi f]b[ h\Y fYdcfhdYf]cX k ]h\ XYgh]bUh]cbg`h\Uh'UfY Wbg]XYfYX gi WWggZi ``\ci g]b[ ci h\ka Yg` X]j ]XYX Vmh\Y hchU` bi a VYf`cZX]gh]bWh\ci gY\c`Xg`YI ]hYX`Xi f]b[ h\Y fYdcfhdYf]cX''` Note: Deceased households are not included in the count of households exited. ``



- &(LSuccessful Housing Outcome/Successful Outcome (# and %): FYZYF ho HUVY %UbX'HUVY & Zof'U'Wta d'YhY']qhoZ\ci g]b['ci lWta Yg''
  - UŁ **Di fdcgY**. `'≢ɔX]WUhYgʻh\Yʻdfc^YWMgʻgi WWggʻ]b`YbX]b[`\ca Y`YggbYgg"'5`\][\Yf`bi a VYf` UbX`fUhY`UfY`Wtbg]XYfYX`dcg]hjj Y"`
    - ]Ł DYfa UbYbhGi ddcfhjj Y <ci g]b[. ≠x]WUhYg'h,Y'dfc'YVMyjgi WWgg']b YbX]b[`\ca Y`YggbYgg'Ug'a YUgi fYX'Vmh\cgY'k\c'fYhU]b dYfa UbYbh\ci g]b['cf'UhhU]b'ch,Yf'dYfa UbYbh\ci g]b["
    - ]]Ł Ci htyuw. Dfc[fua g. ±x]wuhygh. Y'dfc ywwygi]b "]b\_]b['\ci gy\c`xghc' Uddfcdf]uhy byl hghyd \ci g]b['k\]ww Jbwl xygg\y`hyfžhfubg]hjcbu'zubx'dyfa Ubybh \ci g]b['Zcf'gi wwygzī`ci hwa yg'ubx'hfubg]hjcbu'ubx'dyfa Ubybh\ci g]b['cb`mZcf' h\y'gi wwygzī`\ci g]b['ci hwa yg''
    - ]]]Ł 9a Yf[YbWrG\Y`hYf. '\equiv X]WUhYg`h\Y`dfcYVMoy`gi WWYgg`]b``]b\_]b[`\ci gY\c`Xg`hc` Uddfcdf]UhY`bYI hghYd`\ci g]b[`k\]W\`]bWi XYg`fUd]X`fY!\ci g]b[ž'hfUbg]h]cbU`ž'UbX` dYfa UbYbh\ci g]b["`
    - jił GUZYhmG\Y`HYf. ±bX]\VUHYg'H\Y'dfcYVMfygi \WYgg']b``]b\_]b[`\cigY\c`Xg'hc` Uddfcdf]UHY'gYfj]\Wg'Ug'a YUgi fYX'VmYl]h]b['Vi]Ybhg'hc'g]b[`Y'UXi `hg\Y`HYfg'cf' ch\Yf'dYfa UbYbhXYgh]bUh]cbg Zcf'gi \WYggZ\`ci HW¢a Yg''
    - jŁ 5``ch\Yf. ≒x]\WihYg`h\Y`dfcYVMnygi WWgg`]b`YbX]b[`\ca Y`YggbYgg`Ug`a YUgi fYX`Vm\\ci gY\c`Xg`h\UhUHU]b`dYfa UbYbh\ci g]b[''
  - VŁ Dfc. YV Mg. '5" YI W dh'Cj YfZck 'G\Y'HYfg'

# ₩ 8YZlblhcb."

- ]Ł Gi WWggł `Ci Mta Ygʻzcf A Ufm`Uj Ybʻ! GUZYmm'H\Y'bi a VYfczX]gh]bWf\ci gY\c`Xgʻh\UhYI]hXi f]b[ h\YfYdcfhdYf]cX`f]"Y"z`UhYghYI]hzcf\ci gY\c`Xgʻk]h\ a i `h]d`YʻghUngʻXi f]b[ fYdcfhdYf]cXŁgi WWggł `mhc G]b[ `Yʻ5Xi `hG\Y`hYfgʻcf'dYfa UbYbh\ci g]b[ z̈UgʻXYz]bYX`]b`HUV`Y`%UbX`HUV`Y`& UbX`h\Y'dYfWbhU[ Y`cZhchU``X]gh]bWf\ci gY\c`Xg`YI]hYX`h\]gʻbi a VYf`fYdfYgYbhg'''Gi WWggł ``Ci hWta Yg#Gi WWggł ``<ci q]b[ 'Ci hWta Yqʻzcf'Ci hYfUW\Dfc[ fUa q.
  - fWz Gi WW ggZi ``Ci hWta Yg'UfY'h\Y'bi a VYf'cZX]gh]bWt\ci gY\c`Xg'h\UhYl]hXi f]b[ 'h\Y'fYdcfhdYf]cX'f]"Y"z`UhYghYl]hZcf'\ci gY\c`Xg'k]h\ a i `h]d`Y'ghUng'Xi f]b[ 'fYdcfhdYf]cXzgi WW ggZi ``nhc'g\Y'hYfz'hfUbg]h]cbU'zcf'dYfa UbYbh\ci g]b[ 'Ug' XYZ]bYX']b'HUV'Y'%UbX'HUV'Y'&'UbX'h\Y'dYfW'bhU[Y'cZhchU'`X]gh]bWt\ \ci gY\c`Xg'Yl]hYX'h\]g'bi a VYf'fYdfYgYbhg"'''
  - f&k Gi WW ggZi ``<ci g]b[ 'Ci hWta Yg'UfY'h\Y'bi a VYf'cZX]gh]bVh\ci gY\c`Xg'h\UnYI ]h Xi f]b[ 'h\Y'fYdcfhdYf]cX'f]"Y"z``UhYghYI ]hZcf'\ci gY\c`Xg'k ]h\ a i `h]d`Y'ghUng' Xi f]b[ 'fYdcfhdYf]cXk'hc gi WW ggZi ``\ci g]b[ 'Ug'XYZ]bYX']b 'HUV'Y'% UbX'h\Y' dYfW'bhU[ Y'cZhchU'X]gh]bVh\ci gY\c`Xg'k ]h\ 'U'gi WW ggZi ``ci hWta Y'h\]g' bi a VYf'fYdfYgYbhg''''
- ]k Gi WWggZ ``<ci g]b[ Ci Wta Yg Zcf DYfa UbYbhGi ddcfh]j Y <ci g]b[ dfc^YWh h\Y bi a VYf cZX]gh]bWh\ci gY\c`Xg h\UhfYa U]b ]b h\Y DYfa UbYbhGi ddcfh]j Y <ci g]b[ dfc^YWhcf h\UhYl ]hh\Y dfc^YWhXi f]b[ h\Y fYdcfhdYf]cX Zcf ch\Yf dYfa UbYbh\ci g]b[ fUg XYZ]bYX ]b HUV Y % UbX h\Y dYfWbhU[ Y cZhchU`X]gh]bWh\ci gY\c`Xg gYfj YX h\]g bi a VYf fYdfYgYbhg"
- ]]]k Gi WWYggZi ``<ci g]b[ 'Ci hWta Yg Zcf' MA 75 F Ud]X!fY\ci g]b[ 'fYj U'i UhYX Uh'hk c' `Yj Y`gk'

- fl/k Gi WW ggZi ``<ci g]b[ 'Ci h/ka Yg Zcf NA 75 F Ud]X!fY\ci g]b[ 'UfY h\Y'bi a VYf cZ X]gh]bVl/h\ci gY\c`Xg'h\UhYl ]hXi f]b[ 'h\Y'fYdcfhdYf]cX'f]"Y"z``UhYghYl ]hZcf \ci gY\c`Xg'k ]h\ a i `h]d`Y'ghUng;Xi f]b[ 'fYdcfhdYf]cXk'gi WW ggZi ``mhc' dYfa UbYbh\ci g]b[ 'Ug'XYZ]bYX ]b `HUV`Y'% UbX'HUV`Y'& UbX'h\Y'dYfW'bhU[Y'cZ hchU`X]gh]bVl/h\ci gY\c`Xg'Yl ]hYX'h\]g'bi a VYf'fYdfYgYbhg''''
- f&LGi WWggZi ``<ci g]b[ 'Ci hWa Yg'Uhg\Y'hYf'Yl ]h'UfY'h\Y'bi a VYf'cZX]gh]bWh \ci gY\c`Xg'gYfj YX'Vmh\Y'lM 75 F Ud]X!fY\ci g]b[ 'dfc^Y\Mh\UhYl ]h'Zfca 'g]b[ `Y' UXi `h'Ya Yf[ YbWhg\Y'hYfg'Xi f]b[ 'h\Y'fYdcfhdYf]cX'f]"Y"z"\UhYghYl ]h'Zcf' \ci gY\c`Xg'k ]h\ a i `h]d`Y'ghUng'Xi f]b[ 'h\Y'fYdcfhdYf]cXL'hc gi WWggZi ``\ci g]b[ 'Ug'XYZ]bYX']b'HUYY'%'UbX'h\Y'dYfWYbhU[ Y'cZhchU'X]gh]bWh\ci gY\c`Xg'Yl ]hYX' h\]g'bi a VYf'fYdfYqYbhg"'''
- ]j Ł Gi WWggZi ``<ci g]b[ 'Ci hWta Yg Zcf'U``ch\Yf. H\Y'bi a VYf'cZX]gh]bWt\ci gY\c`Xg h\UniYl ]hXi f]b[ 'h\Y'fYdcfhdYf]cXf]'Y"z``UhYghYl ]hZcf'\ci gY\c`Xg'k ]h\ a i `h]d`Y ghUng;Xi f]b[ 'fYdcfhdYf]cXŁhc gi WWggZi ``\ci g]b[ 'Ug'XYZ]bYX']b 'HUV'Y %UbX'h\Y' dYfWbhU[Y'cZhchU`X]gh]bWt\ci gY\c`Xg'Yl ]hYX'h\]g bi a VYf'fYdfYgYbhg''''
- XŁ; cu'!gYHjb['a Yh\cXc'c[m'A YYhcf'YI WYX'7G6'6cUfX'9bXg'Dc']Wzi<18'GHJbXUfXgzcf' df]cf'dYfZcfa UbW''''
  - ]Ł FUd]XFY!\ci g]b[ž<ca Y`YggbYgg`DfYj Ybh]cbžUbX`HfUbg]h]cbU``<ci g]b[.`A i `h]d`m h\Y`dYfWbHU[Y`[cU`Vmh\Y`dfc^YWXXbi a VYf`cZYl]hYX`\ci gY\c`Xg''
  - ]L A Ufm\Uj Yb'! GUZYhm'Gi WWggZi `Ci HWta Yg. A i `h]d`mth\Y'dYfWbHU[Y'[cU`Vmth\Y'dfc^YVMYX'bi a VYf'cZYI]hYX'\ci gY\c`Xg'hc`YUW\`XYgh]bUh]cb`XYZ]bYX']b'HUV'Y'%' UbX'&"''
  - ]]]k Ci hfYUM Dfc[fUa g. "
    - fl/k\_Gi WWggZi ``Ci h/k/a Yg. A i `h]d`mh\Y`dYfWlbhU[Y`[cU``Vmh\Y`dfcYVMYX`bi a VYf` cZYl]hYX`\ci gY\c`Xg`k]h\ YUW\ XYgh]bUh]cb`XYZ]bYX`]b`HUV`Y`%UbX`&"`
    - f&LGi WWggZi``<ci g]b['Ci hWta Yg.'A i `h]d`mh\Y'dYfWbhU[Y'[cU`'Vmh\Y'dfc^YVWX' bi a VYf'cZGi WWggZi`'Ci hWta Yg"'
  - ]j Ł 9a Yf[YbWnG\Y`hYf. A i `h]d`mh\Y fUhY Vmh\Y bi a VYf cZYl ]hg hc cVhU]b h\Y bi a VYf cZGi WWygqZi `<ci g]b[ Ci hWta Yg"
  - jł DYfa UbYbh'Gi ddcffnjj Y'<ci gjb['UbX'HfUbg]hjcb'Dfc'YVM'A i `hjd`m'h\Y'dYfVM'bhU[Y' [cU`Vm'h\Y'dfc'YVMYX'bi a VYf'cZ\ci gY\c`Xg'gYfj YX'''

# YŁ FYdcfhlb[ a Yh\cXc\c[m"

- ]Ł Gi WWggł ``Ci Hwta Ygʻzcf'A Ufm\Uj Ybʻ! GUzyhmʻ7U'WʻUhyʻh\yʻhchU`bi a VYfʻcz X]gh]bWi\ci gY\c`X'Yl ]hgʻXi f]b[ 'h\yʻfydcfhdYf]cX'UbX'h\yʻhchU`bi a VYfʻcz XYgh]bUh]cbgʻh\Uh'UfyʻWtbg]XYfYX'gi WWggł ``g\Y`hYf`UbX'\ci g]b[ 'ci hwta YgʻdYf` HUV`Y'%UbX'HUV`Y`&": cf'h\yʻfUhYžX]j ]XY'h\]gʻbi a VYf`cZGi WWggł ``Ci hwta YgʻVm h\Ybi a VYf`cZhchU`Yl ]hgʻXi f]b[ 'h\yʻfydcfhdYf]cX"''
- ]]k : cf Ci HYUW Dfc[fUa g.
  - flk\_Gi WWggZi ``Ci hlka Yg. '7U`Wi`UhY'h\Y'hchU``bi a VYf`cZX]gh]bWfi\ci gY\c`X`Yl ]hg` Xi f]b[ 'h\Y'fYdcfhdYf]cX'UbX'h\Y'hchU``bi a VYf`cZXYgh]bUh]cbg'h\Uh'UfY` Wbg]XYfYX'gi WWggZi ``g\Y'hYf'UbX'\ci g]b[ 'ci hlka Yg'dYf'HUV'Y'%'UbX'HUV'Y'&"` cf'h\Y'fUhYžX]j ]XY'h\]g'bi a VYf`cZGi WWggZi ``Ci hlka Yg'Vmh\Y'bi a VYf`cZhchU`Yl ]hg'Xi f]b[ 'h\Y'fYdcfhdYf]cX''``



- f&LGi WYggZi `<ci g]b[ 'Ci hWta Y`fil L'7U'W\`UhY`h\Y`hchU`bi a VYfcZGi WYggZi ``
  - Ci hvta Yq fluvcj YŁUbX h\Y hchu bi a VYf cZXYqhlbUhlcbg h\UhUfY VtbqlXYfYX
  - Gi WWggZi`<ci g]b[ Ci hWta Yg fUg dYf HUVY %2"8]j ]XY h\Y bi a VYf cZ
  - Gi WWggZi ``<ci g]b[ 'Ci hWta Yg'Vmth\Y'bi a VYfcZhchU'Gi WWggZi `'Ci hWta Yg''
- ]]]k: cf DYfa UbYbhGi ddcfhjj Y <ci g]b[. Gi a 'h\Y hchU' bi a VYf cZX]gh]bWf\ci gY\c`X' Yl ]hg Xi f]b[ 'h\Y fYdcfhdYf]cX'k ]h\ XYgh]bUh]cbg h\UhUfY Wtbg]XYfYX gi WWggZi`\ci g]b[ 'ci hWta Yg UbX'h\Y bi a VYf fYg]X]b[ ']b DYfa UbYbhGi ddcfhj Y <ci g]b[ 'Uh h\Y YbX cZh\Y fYdcfhdYf]cX'': cf h\Y fUhYžX]j ]XY h\]g bi a VYf cZGi WWggZi`\<ci g]b[ 'Ci hWta Yg Vmh\Y hchU' bi a VYf cZX]gh]bWf\ci gY\c`Xg gYfj YX Xi f]b[ 'h\Y' fYdcfhdYf]cX''' Note: Deceased households are not included in the count of households served.'''
- ]j Ł Gi WWggZi ``<ci g]b[ 'Ci Hwta YgʻZcf'U``ch\Yf`dfc^Ywtg. '7U`W'`UhY h\Y`hchU`bi a VYf`cZ X]gh]bWh\ci gY\c`X`YI ]hgʻXi f]b[ 'h\Y`fYdcfhdYf]cX`UbX`h\Y`hchU`bi a VYf`cZ XYgh]bUh]cbg'h\UhUfY`Wtbg]XYfYX`gi WWggZi ``\ci g]b[ 'ci hwta YgʻZcf'h\Uhdfc^YVth' : cf'h\Y`fUhYžX]j ]XY`h\]gʻbi a VYf`cZGi WWggZi ``<ci g]b[ 'Ci hwta YgʻVmh\Y`bi a VYf cZhchU`YI ]hgʻXi f]b[ 'h\Y`fYdcfhdYf]cX'''

## &) \text{\text{Turnover Rate (%):}}

- UŁ **Di fdcgY.** Hi fbcj Yf fUhY ]bX]WUhYg h.Y dfc YVM YZZYVM YbYgg ]b dfcj ]X]b[ 'ghUV'Y' \ci q]b[ "FUhY ]g a cb]hcfYXžVi hbchYj Ui UhYX"
- VŁ **Dfc'YVMa**, DYfa UbYbhGi ddcfh**i** Y <ci g|b[
- WE 8YZIb]hjcb. HAY fUhY Uhk \]WA i b]hg VYWta Y j UWUbhfY Uhj Y hc hAY dfc YWhWUdUNjhm"
- XŁ; cu'!gYhi]b[ a Yh\cXc`c[m'GYhVUgYX cb'df]cf'dYfZcfa UbW'': cf'bYk 'dfc'YVhgž7G6' Ygh]a UhYg'h\Y'Zc``ck]b[ 'hi fbcj Yf'fUhYg '5bbi U`fUhY. '&\$ı /GYa]!Ubbi U`fUhY. '%\$ı /Ei UfhYf'mfUhY.') ı "''A cb]hcfYXžVi hbchYj U`i UhYX"
- YE **FYdcffjb[ a Yth.cXc`c[m**"H\Y hchU bi a VYf`cZX]ghjbVhi\ci gY\c`X`YI]hYX`Xi f]b[ 'U` fYdcfhdYf]cX`X]j ]XYX`Vmh\Y`dfc^YVhiVVdUVJhmXi f]b[ 'h\Y`gUa Y`fYdcfhdYf]cX''

### &\* LUsage of CSB Direct Client Assistance (DCA) (# and %):

- UŁ **Di fdcgY**. ±bX]/WhYg h\Uhh\Y dfcYWn]g Ugg]gh]b[ `\ci gY\c`Xg hc UWWgg 875 UbX cVhJ]b`\ci g]b[ "5`\][ \Yf`bi a VYf#fUhY cZUWWgg ]g Wtbg]XYfYX dcg]h]j Y"
- VŁ **Dfc^YWkg**. 'Ci hfYUW.' Dfc[fUa gž: Ua] m'G\Y`hYfgžFUd]X`FY!\ci g]b[žGGJ: 'dfc^YWkgž' <ca Y`YggbYgg`DfYj Ybh]cbžUbX`HfUbg]h]cb`Dfc^YWkl'
- VY 8YZJb]h]cb. H\Y'bi a VYf'cZYI]hYX'X]gh]bWh\ci gY\c`Xg'fYW]j]b['Y]h\Yf'HfUbg]h]cb'875' Xi f]b['h\Y'fYdcfhdYf]cX'cf'fUd]X'fY!\ci g]b[#dfYj Ybh]cb'875'Xi f]b['h\Y]f'dfc'YWh dUfh]V]dUh]cbžUbX'h\Y'dYfWbhU[Y'cZhchU'X]gh]bWh\ci gY\c`X'YI]hg'Xi f]b['h\Y'fYdcfh'dYf]cX'h\]g'bi a VYf'fYdfYgYbhg'''
- XŁ; **cU!gYH]b[ a Yh\cXc`c[ m**`A YYhcf`YI WYX`7G6`6cUfX`9bXg`Dc`]WM`VUgYX`cb`\]ghcf]WU`` hfYbXgžUbh]WJdUhYX`dYfZcfa UbW\ZUbX#cf`dfc^YWhXYg][ b"``
- YŁ FYdcfhibi a Yhloxcicim
  - ]Ł: cf`FUd]X`FY!\ci g]b[`UbX`<ca Y`YggbYgg`DfYj Ybh]cb``
    f%ŁH\Y`hchU``bi a VYf`cZX]gh]bWh\ci gY\c`Xg`h\UhfYW]j YX`875`k\]`Y`]b`h\Y`dfcYWh`
    UbX`YI]hYX`Xi f]b[`h\Y`fYdcfhdYf]cX"``

- f&L Hc cVhU]b i gU[Y fUhYžh\Y UVcj Y bi a VYf]g X]j ]XYX Vmh\Y hchU bi a VYf cZ X]gh]bVh\ci gY\c`Xg h\UhYl ]hYX h\Y dfc YVh Xi f]b[ h\Y fYdcfhdYf]cX" <ci gY\c`Xg h\UhYl ]hYX gi WWggZ ``mk ]h\ci hUWWgg]b[ 875 UfY YI WI XYX Zfca h\Y XYbca ]bUhcf"
- ]]k : cf HfUbg]h]cb
  - fl/L H\Y hchU`bi a VYf`cZX]gh]bVh(\ci gY\c`Xg`h\UhfYW]j YX`7G6`875`Xi f]b[`h\Y`fYdcfhdYf]cX"
  - f&LHc cVhU]b i gU[YfUhYžh\Y UVcj Ybi a VYf]gX]j ]XYX Vmh\YhchU`bi a VYf cZX]gh]bVh\ci gY\c`Xg gYfj YX Xi f]b[ h\YfYdcfhdYf]cX"

# &+ŁUsage of CSB Direct Client Assistance (DCA) (Average \$ Amount per Household):

- Di fdcgY. \*\(\pi\)X]\WhYg'h\Uhh\Y'dfc\Y\Wi]g'\Wgh\YZ]\WhYg'h\Uhh\Y'dfc\Y\Wi\\gg]b['875"'5"ck Yf' Uj YfU[Y'Ua ci bhdYf'\ci gY\c'X']bX]\WhYg'h\Uhh\Y'dfc\Y\Wi\\Ug''\Yj YfU[YX'ch\Yf' \Wa a i b]\mfYgci f\Wg''
- [Ł **Dfc^YVMg**, FUd]X FY!\ci g]b[ž<ca Y`YggbYgg DfYj Ybh]cbžUbX HfUbg]h]cb Dfc^YVM
- \Ł 8YZJb]hjcb.: cfFUd]XFY!\ci g]b[ 'UbX'<ca Y`YggbYgg'DfYj Ybhjcbžh\Y'Uj YfU[ Y'Xc``Uf' Ua ci bhcZhchU`7G6'X]fYVhiW]YbhUgg]ghUbW'fYW]j YX'dYf'X]ghjbVhi\ci gY\c`X'YI ]hYX' Xi f]b[ 'h\Y'fYdcfhdYf]cX"'': cf'HfUbg]hjcbžh\Y'Uj YfU[ Y'Xc``Uf'Ua ci bhcZhchU`7G6' X]fYVhiW]YbhUgg]ghUbW'fYW]j YX'dYf'X]ghjbVhi\ci gY\c`X'gYfj YX'Xi f]b[ 'h\Y'fYdcfh' dYf]cX"'</p>
- ]Ł; cU'!gYHjb['a Yh\cXc`c[m'6UgYX'cb'\]ghcf]WJ`'hfYbXgž'UbhjVJdUhYX'dYfZcfa UbW'ž'Uj U]`UV`Y'fYgci fWgž'UbX'dfc'YVhiXYg][b"
- Explosion of the first term of the firs
  - i) : cfFUd]XFY!\ci g]b[ 'UbX' < ca Y`YggbYgg'DfYj Ybh]cbžhchU` a cbYhUfmUgg]ghUbW' Uk UfXYX hc \ci gY\c`Xg'h\UhYI ]hYX'Xi f]b[ 'fYdcfhdYf]cX'#'hchU` bi a VYf'cZX]gh]bWi\ \ci gY\c`Xg'YI ]hYX'h\UhfYW'] YX'Ugg]ghUbW'"</li>
  - ii) : cf`HfUbg]h]cbžhchU`a cbYhUfmUgg]ghUbWf`Uk UfXYX`hc`U```\ci gY\c`Xg`gYfj YX` Xi f]b[`fYdcfhdYf]cX`#`hchU`bi a VYf`cZX]gh]bWf\ci gY\c`Xg`gYfj YX`h\UhfYWf]j YX` Ugg]ghUbWf"



**Table 1: Successful Housing Outcomes** (see above item 23 and 24)

HUD Destination	Does Head of household Control Housing? <sup>1</sup>	Successful Housing Outcome?
1 = Emergency shelter, including hotel or motel paid for with emergency shelter voucher (including a youth shelter, or campground paid for with emergency shelter voucher)	No	No
2 = Transitional housing for homeless persons (including homeless youth) - Huckleberry House – Transitional Living Program, Maryhaven - Women's program, VOAGO Veterans Program <sup>2</sup>	Varies	No (Except for Emergency Shelters and Outreach)
3 = Permanent housing (other than RRH) for formerly homeless persons - all PSH and CoC projects, HOME, HUD, CSB subsidized	Yes	Yes
4 = Psychiatric hospital or other psychiatric facility <sup>2</sup>	No	No
5 = Substance abuse treatment facility or detox center <sup>2</sup>	No	No
6 = Hospital or other residential non-psychiatric medical facility <sup>2</sup>	No	No
7 = Jail, prison or juvenile detention facility	No	No
8 = Rental by client, no ongoing housing subsidy - privately owned, market rent housing	Yes	Yes
9 = Owned by client, no ongoing housing subsidy	Yes	Yes
$10 = $ Staying or living with family, temporary tenure (e.g., room, apartment or house) $^2$	No	No
11 = Staying or living with friends, temporary tenure (e.g., room, apartment or house) <sup>2</sup>	No	No
12 = Hotel or motel paid for without emergency shelter voucher	No	No
13 = Foster care home or foster care group home <sup>2</sup>	No	No
14 = Place not meant for habitation (e.g., a vehicle, an abandoned building, bus/train/subway station/airport or anywhere outside)	No	No
15 = Safe Haven	No	No
16 = Rental by client, with GPD TIP housing subsidy	Yes	Yes
17 = Rental by client, with RRH or equivalent subsidy	Yes	Yes
18 = Rental by client, with VASH subsidy - Veterans Affairs Supportive Housing (VASH)	Yes	Yes
19 = Rental by client, with other ongoing housing subsidy	Yes	Yes
20 = Owned by client, with ongoing housing subsidy	Yes	Yes
21 = Staying or living with family, permanent tenure	Yes <sup>1</sup>	Yes
22 = Staying or living with friends, permanent tenure	Yes <sup>1</sup>	Yes
23 = Deceased	No	No
24 = Long-term care facility or nursing home	No	No
25 = Moved from one HOPWA funded project to HOPWA PH	Yes	Yes
26 = Moved from one HOPWA funded project to HOPWA TH	No	No
27 = Residential project or halfway house with no homeless criteria	No	No
28 = No Exit Interview Completed	No	No
29 = Other	No	No
30 = Client Doesn't Know	No	No

<sup>&</sup>lt;sup>1</sup> Heads of household are determined to be in control of their housing if the lease/mortgage is in their name or if they otherwise have a written agreement that gives them a right to reside in their housing, such as a roommate agreement.

<sup>&</sup>lt;sup>2</sup> A successful housing outcome for Huckleberry House Emergency Shelter.

# **FY2020 Program Evaluation**

HUD Destination	Does Head of household Control Housing? <sup>1</sup>	Successful Housing Outcome?
31 = Client Refused	No	No
32 = Data Not Collected	No	No

In addition to the outcomes specified in Table 1 for successful housing outcomes, the outcome listed in Table 2 is considered successful for the Successful Outcome indicator.

Table 2: Successful Outcomes (applies only to Safety Shelter and Outreach Programs)

HUD Destination	Successful Outcome? (Safety Shelter)
1 = Emergency shelter, including hotel or motel paid for with emergency shelter voucher	Yes

HUD Destination	Successful Outcome? (Outreach programs)
1 = Emergency shelter, including hotel or motel paid for with emergency shelter voucher	Yes
2 = Transitional housing for homeless persons (including homeless youth)	Yes
4 = Psychiatric hospital or other psychiatric facility	Yes
5 = Substance abuse treatment facility or detox center	Yes
10 = Staying or living with family, temporary tenure (e.g., room, apartment or house)	Yes
11 = Staying or living with friends, temporary tenure (e.g., room, apartment or house)	Yes
13 = Foster care home or foster care group home	Yes
15 = Safe Haven	Yes
24 = Long-term care facility or nursing home	Yes
26 = Moved from one HOPWA funded project to HOPWA TH	Yes
27 = Residential project or halfway house with no homeless criteria	Yes



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