



MUSC2113

:]a `A i g]W

GYa YghYf`Hk c ``##`&\$%



GWcc``cZHAY`5ftg`UbX`A`YXJU``#`I`BGK``5ftg`UbX`GcWJU``GWYbWg

7ci fgY`Cj Yfj]Yk

`GHUZZ`7cbhUW`i8YHU]`g`

`7cbj Ybcfg`

B Ua Y	9a U]`	5j U]`UV]`]m	@cW]h`cb	D\cbY
>c\b`DYHfgcb	^dYHfgcb4 i bgk "YXi "Ui		K YVghYfz%\$)	- ' ,) ` (, +\$

`@YW`i fYfg`

B Ua Y	9a U]`	5j U]`UV]`]m	@cW]h`cb	D\cbY
>c\b`DYHfgcb	^dYHfgcb4 i bgk "YXi "Ui		K YVghYfz%\$)	- ' ,) ` (, +\$

GWXcc`7cbhUW`i`bZcfa Uh]cb

Fcca " %&ž`Yj Y`" `F cVYfhK YVghYf`6i]X]b[

D\cbY. f\$&E`- ' ,) ` (,) *

9a U]`. [gUa 4 i bgk "YXi "Ui](#)

K YVg]hY.`

5 WUXYa JWbZcfa Uh]cb`

: cfYggYbh]U`ghi XYbh]bZcfa Uh]cb`fY`Uh]b[`hc. fYei Ygrg`Zcf`YI hYbg]cb/fYj]Yk `cZa Uf_g/cVW dUh]cbU`\\YU`h
UbX`gUZ`m/YI Ua]bUh]cb`dfcW`Xi fYg/gdYW]U`W`bg]XYfUh]cb`]b`hY`Yj Ybh]cZ]`bYgg`cf`a]gUXj Ybh] fY/
ghi XYbhYei]mUbX`X]gUV]`]m/UbX`chYf`YggYbh]U`UWUXYa]W]bZcfa Uh]cb`z
gYY`[\hdg.#k k "Ufmg"i bgk "YXi "Ui #W ffYbh\]gh XYbmg#UWUXYa \]W\]bZcfa Uh\]cb`dfcfcW`g!\[i \]XY`\]bYg#](#)

7ci fgY'8YHJ]`g

7fYX]hDc]bHg`*`

Gi a a UfmcZh\Y'7ci fgY

Gi VYWh5fYU.`? ge[U

H\]g`Wci fgY`cZYfg`gh XYbHg`hY`cddcffi b]mhc`ghi Xmih\Y`\]gfcfmcZh\Y`fY`Uhjcbg\]d`VYrk YYb`a i g]WUbX

5ggYgga Ybh

5ggYgga YbhHUg_g

5ggYgga YbhHUg_	K Y][\h	8i Y'8UH	Gh XYbh@YUfb]b[Ci hWta Yg'5ggYggYX
:]a 'GWcf]b['5W]j]mUbX 5bU'm]WU' BchYg') \$i	% 'C WtcVYfz'&\$%	B #5
:]a 'A i g]W>ci fbU'	&\$i	GYY' bchYg'VY'ck 'Zcf]bX]j]Xi U'Xi Y'XUH'g"	B #5
:]a 'A i g]W<]ghcfmHYgh%	%)	\$* 'GYdhYa VYfz'&\$%	B #5
:]a 'A i g]W<]ghcfmHYgh&	%)	&) 'C WtcVYfz'&\$%	B #5

5ggYgga Ybh8YHU]`g

5ggYgga Ybh% :]a 'GWcf]b['5W]j]mUbX'5bU'm]WU' BchYg

GHUfhXUH'.

8YHU]`g. H\Y :]a 'GWcf]b['5W]j]mUbX'5bU'm]WU' BchYg'k]`VY'a Uf_YX'UbX'fYh'fbYX'hc'gh'XYbhg'UhH'Y
Wta d'Yh'cb'cZ'h'Y'Wci'fgY"

5XX]h]cbU'XYHU]`g.

:]a !GWcf]b['5W]j]mUbX'5bU'm]WU' BchYg'f9ggUm]z) \$i

H\]g'UggYgga Ybh]Y'a]g]b'k'c'dUfng.

DUfh%!:]a !GWcf]b['5W]j]m' Mci 'k]`VY'Ug_YX'hc'dfcj]XY'a i g]W]hc'UW'Wta dUbmik'c'g\cfhgW'YbYg'fU_Yb
Zca 'U'gY'Y'W'X'Z'a 'cf'Z'a g" H\Y'a i g]Wdfcj]XYX'a UmW'cbg]ghcZY]h'Y'f'U'c'f]]bU'a i g]W'Wta d'cgYX
YgdY'W]U'm'Z'f'h'Y'g'W'Y'g'c'f'f'U'Y]gh]b['f'Y'W'f'X]b['g'c'Za i g]W'h'U'h'mci 'YX]h'U'X'U'X'hc'h'Y'g'W'Y'g'"G'Y] Y'fU'
g'W'Y'g'Z'ca 'U'gY'Y'W'X'Z'a 'f'c'f'Z'a g'k]`VY'a UXY'Uj U]UV'Y'hc'gh'XYbhg]U'A'cc'X'Y'"9'U'W'g'W'Y'k]`VY'
Uddfcl]a U'h'm'k'c'f'&'L'hc'h'f'Y'f'l'z'a]bi'h'g]b'Xi'f'U'h'cb""7'ca'd'f'Y'Y'bg]]Y]b'gh'f' W]cbg'cb'\ck'hc'Wta d'Y'h'
h'g]UgdY'W'c'Z'h'Y'Ugg][ba Ybhk]`VY' []Y'b'hc'gh'XYbhg'Xi'f]b['gYa YghY'f"

DUfh&'-'5bU'm]WU' BchYg#9ggUm'Mci 'a i gh'U'gc'Wta d'Y'h'Ub'UbU'm]WU' YggUm'f'W""%) \$\$'k'c'f'X'g'k'h'Uh
f'gh]Z]Y'g'mci'f'W'c]W'c'Za i g]W]b'h'Y'g'Y'W'X'g'W'Y'g'UbX'Yb[U[Y'g'k]h'h'Y'W'f'f'Y'bh]h'f'U'h'f'Y'cb'h'Y'
gi'V'Y'W' H\]g]g'b'chU'a U'h'f'c'Za Y'f'Y'm'Yl'd'f'Y'gg]b['mci'f'd'Y'f'g'cbU'cd]b]cb.'mci' a i gh'f'gh]Z'mci'f'W'c]W'c'Z
a i g]W'Z'c'f'Y'U'W' Wta d'Y'h'X'g'W'Y'g'V'm'd'f'c]]X]b['Y]]X'Y'b'W'c'Z'mci'f'i'b'X'Y'f'gh'U'X]b['c'Z'h'Y'g'Y'W'c'b'W'd'h'g'UbX'
h'c'g'Y'X]g'W'gg'Y'X']b'h'Y'Y'W'h'f'Y'g'UbX'h'hc'f]U'g'XY']Y'f'Y'X'h'f'ci [\ci'h'h'Y'W'ci'fgY'"G'h'XYbhg
g'W'c'i'X'a U_Y'gd'Y'W'Z]W'f'Y'Z'f'Y'b'W'hc'U'h'Y'U'gh'g'ca'Y'c'Z'h'Y']h'f'U'h'f'Y']b'W'XY'X'cb'h'Y'G'i [[Y'gh'X'F'Y'U'X]b[
@]gh]Z'UbX'h'i'g'd'f'c]]XY'U'W'c'b'h'i'h'f'V'c'h'\]gh'c'f]WU'UbX'g'c'W]U'Z'c'f'h'Y'f'Y'U'g'cbg'VY'\]b'X'mci'f'W'c]W'c'Za i g]W'
Z'c'f'Y'U'W'Z'a 'Yl'W'f'd'h'

gh'f'f' W]cbg'Z'c'f'gi Va]h]b['h'Y'a U'h'f]U'g'Uggc'W]U'h'X'k]h'h'g]Ugg][ba Ybhk]`VY'X]g'W'gg'Y'X']b'h'Y'Y'W'h'f'Y'
g'Y'f]Y'g'z'Vi'h'h'Y'Z]bU'gi Va]gg]cb'X'U'h']g(' "\$da'cb'H\i'fg'X'Um%' 'C'h'W'c'V'Y'f'f'k'Y'Y'_%&L"

H\Y :]a !GWcf]b['5W]j]mUbX'5bU'm]WU'9ggUm'Wta d'f]g'Y'g) \$i 'c'Z'hc'U'a Uf_Z'c'f'h'Y'W'ci'fgY"

5ggYgga Ybh&. :]a 'A i g]W>ci fbU'

GhUfhXUHY. 'Bch5dd`]WUV`Y

8YHUJ`g. 'H<Y`>ci fbU`k]`VY`Wc`YW`X`UbX`a Uf_YX`UbX`fYh fbYX`hc`gh XYbhg`VmiK`YY_`*`cZgYa`YghYf`gc`hUh`hYmia`UmUggYgg`hY]f`dfc[`fYgg`]b`hY`Wc`i`fgY"

5XX]h]cbU`XYHUJ`g.

H\Y:]`a`'A`i`g]W>ci fbU`Wc`a`df]gYg`U`hc`H`c`Z`&\$i`'cZ`hY`hc`H`a`Uf`_`Zc`f`h`g`Wc`i`fgY"

h]g`VUgYX`cb`hY`Wc`a`d`Y`h]cb`c`Z`h`c`g`Y`h`U`W`h]`h]Yg" 9UW`X`U`W`h]`]m]g`k`Y][`h`X`i`b`h`Y`Z`c`k`]b[`'a`UbbYf.`%&`>ci`fbU`5W`h]`]m`%`1`'`i`/`X`i`Y`%`\$`\$`da`z`H`i`fgXUm`\$`&`5`i`[`i`g`h`z`&`\$`%`'f`K`YY`_`&`t`/`&`t`>ci`fbU`5W`h]`]m`&`'1`'`%`&`i`/`X`i`Y`%`\$`\$`da`z`H`i`fgXUm`%`*`5`i`[`i`g`h`z`&`\$`%`'f`K`YY`_`('`L`"

h]g`f`i`W`h]cbg`Zc`f`g`i`Va`]gg]cb`c`Z`h`Y`g`Y`]h`Ya`g`k`]'`VY`[`]`Y`b`'j`]U`A`cc`XY`'UbX`Xi`f]b[`'hY`'Y`W`h`fY`g`Yf]Yg"

5ggYgga`Ybh'`.:]`a`'A`i`g]W<`]g`h`c`f`m`i`H`Y`g`h`%

GhUfhXUHY. '

8YHUJ`g. ':]`a`'A`i`g]W<`]g`h`c`f`m`i`H`Y`g`h`%`k`]'`VY`'a`Uf`_`YX`'UbX`'fYh`fbYX`'hc`'gh`XYbhg`'Xi`f]b[`'gYa`YghYf`'gc`hY`mi`W`U`b`U`gg`Y`gg`h`Y`]f`dfc[`fYgg"

5XX]h]cbU`XYHUJ`g.

'`h!`7`Ugg`HYgh`&`z`%`i`

H\Y`h`Y`g`h`k`]'`VY`VUgYX`cb`'a`U`h`Y`f]U`g`'h`U`_`Y`b`Z`f`ca`'F`Y`U`X`]b[`g`z`@`Y`W`h`fY`g`z`UbX`'Hi`hc`f]U`g`'\`Y`X`'Xi`f]b[`'K`YY`_`g`'`%`hc`*`"

H\Y`h`Y`g`h`k`]'`VY`Wc`b`Xi`W`h`X`'j`b`h`Y`'Hi`hc`f]U`'h]a`Y`'Uh`'da`'cb`'\$`*`G`Y`d`h`Ya`V`Y`f`f`K`YY`_'`+`t`z`UbX`'k`]'`VY`U`dd`f`c`l`]a`U`h`Y`'m`('`'a`]b`i`h`Y`g`'j`b`'Xi`f`U`h]cb"

Hi`fb]h]b`'g`Y`h]b[`.'`H\]g`'j`g`'b`c`h`U`'Hi`fb]h]b`'U`gg][`ba`Y`bh`

5ggYgga`Ybh(`.:]`a`'A`i`g]W<`]g`h`c`f`m`i`H`Y`g`h`&

GhUfhXUHY. '

8YHUJ`g. ':]`a`'A`i`g]W<`]g`h`c`f`m`i`H`Y`g`h`&`k`]'`VY`'a`Uf`_`YX`'UbX`'fYh`fbYX`'hc`'gh`XYbhg`'U`h`h`Y`'Wc`a`d`Y`h]cb`'c`Z`h`Y`Wc`i`fgY"

5XX]h]cbU`XYHUJ`g.

•`h!`7`Ugg`HYgh`&`z`%`i`

H\]g`h`Y`g`h`k`]'`VY`VUgYX`cb`'a`U`h`Y`f]U`'h`U`_`Y`b`Z`f`ca`'F`Y`U`X`]b[`g`z`@`Y`W`h`fY`g`z`UbX`'Hi`hc`f]U`g`'\`Y`X`'Xi`f]b[`'K`YY`_`g`'+`'hc`%`&`"

H\Y`h`Y`g`h`k`]'`VY`Wc`b`Xi`W`h`X`'j`b`h`Y`'bc`fa`U`'h`hc`f]U`'h]a`Y`'Uh`'da`'cb`'H`i`fgXUm`&`%`C`W`c`V`Y`f`f`K`YY`_'`%`t`z`UbX`'k`]'`VY`U`dd`f`c`l`]a`U`h`Y`'m`('`'a`]b`i`h`Y`g`'j`b`'Xi`f`U`h]cb"

Hi`fb]h]b`'g`Y`h]b[`.'`H\]g`'j`g`'b`c`h`U`'Hi`fb]h]b`'U`gg][`ba`Y`bh`

Gi Va]gg]cb'cZ5ggYgga YbhHUg_g

Gh XYbng'UFY'YI dYWX'hc'di hH'Y'f'buA Yg'UbX'ghi XYbhbi a VYfg'cb'Yj YfmdU[Y'cZ'HY]f'Ugg][ba Ybng"

Hi fb]hb'Gi Va]gg]cb

Zmci 'YbWci bHY'U'dfcV'Ya 'k \Yb'UHYa dh]b['hc'gi Va]hrci f'Ugg][ba Ybh'fci [\ 'Hi fb]hb'z'd'YUgY
HY'd\cbY'9I HYfbU'Gi ddcf'hc'b'-' ,) ' ' ' %cf'Ya U]'hYa 'cb'[YI HYfbU'HY'f'gi ddcf'f' i bgk "YXi "Ui "](#)Gi ddcf'h
\ci fg'UFY' , .\$\$Ua '-'%. \$\$da 'cb'k YY_XUmg'UbX'-. \$\$Ua '-') . \$\$da 'cb'k YY_YbXg'f'l *) 'XUmg'U'mYUf'Zmci
UFY' i bUV'Y'hc'gi Va]hrci f'Ugg][ba YbhXi Y'hc'U'ZU' 'hk]h'Hi fb]hb'rci 'a UmUdd'm'Zcf'Ub'YI HYbg]cb'z'Vi hrci
a i ghfY'U]b'rci f'h]W_Yhbi a VYf'Zca '9I HYfbU'Gi ddcf'h'U'cb['k]h'Ubmc'h'Y'f'f'Y'Yj Ubh'Xc'W a Ybng'hc
]b'Wi XY'Ug'Yj]XYb'W'hc'gi ddcf'hrci f'YI HYbg]cb'Udd']W]h'cb'" Zmci 'Ya U]'9I HYfbU'Gi ddcf'hrci 'k]'
Ui 'ca U]h]W'm'f'Y'W'j Y'U'h]W_Yhbi a VYf'z'Vi h]Zmci 'HY'd\cb'Y'mci 'k]' 'b'Y'X'hc'gd'Y'W]W'm'Ug'_Zcf'cb'Y"
Hi fb]hb'U'gc'd'fcj]XY'gi dXU'g'cb'h'Y]f'gmg'Ya 'gh'U'h'g'cb'Hk]h'f'"

; YbYfU'm'z'UggYgga YbhHUg_g'a i ghVY'gi Va]h'X'Y'Y'W'f'cb]W'm'j]U'Y]h'Y'f'Hi fb]hb'cf'U'A ccX'Y
Ugg][ba Ybh' 'b]bg'h'Ub'W'g'k \Y'f'Y'h']g']g' b'chid'cgg]V'Y'z'hk]' 'VY'g'U'Y'X'cb'mci f'Wci fg'Y'g'A ccX'Y'g]h'k]h'
U'h'fb'U]h] Y'gi Va]gg]cb'XY'U]g"

@UH'5ggYgga YbhDYbU'h]Yg

Gh XYbng'UFY'f'Yg'd'cbg]V'Y'Zcf'h'Y'gi Va]gg]cb'cZUggYgga YbhHUg_g'Vmi'h'Y'f'Yei]f'Y'X'XU'Y'g'UbX'h'a Yg'
8Yd'YbX]b['cZ'HY'YI HY'bh'cZXY'Um]b'h'Y'gi Va]gg]cb'cZUb'UggYgga YbhHUg_g'dUgh'h'Y'Xi Y'XU'Y'UbX'h'a Yz'
cb'Y'cZ'HY'Zc'ck]b['UH'd'Yb'U'h]Y'g'k]' 'Udd'mi b'Ygg'gd'Y'W'U'W'c'bg]XY'f'U'h'cb'cf'U'V'Ub_Y'h'YI HY'bg]cb'Xi Y'hc'U'
HY'W'b]W'ci 'U]Y']g['f'Ub'h'X'": cf'h'Y'di f'd'cg'Y'cZ'U'Y'd'Yb'U'm'W'W'U'h]cb'z'U'X'U'm]g'XY'Ya YX'hc'VY'Y'U'W'
&(!\ci f'd'Y'f]c'X'f'c'f'd'U'f'h'Y'f'Y'c'Z'd'U'gh'h'Y'g'h]di 'UH'X'XY'UX']b'Y'Zcf'gi Va]gg]cb"

- K cf'_gi Va]h'X'Y'gg'h'Ub'%'\$'XUmg'U'Z'h'f'h'Y'g'h]di 'UH'X'XY'UX']b'Y']g'gi V'Y'W'hc'U'XY'Xi W]cb'cZ
) i 'cZ'HY'hc'U'Uk U'f'X'U'V'Y'a U'f'_Zca 'h'Y'a U'f_'h'U'hk ci 'X'\Uj Y'V'Y'Y'b'U'W'X]Yj YX']Z'b'ch'Zcf'h'Y'
d'Yb'U'm'Zcf'Yj Y'f'm'X'U'm'd'U'gh'h'Y'g'h]di 'UH'X'XY'UX']b'Y'Zcf'gi Va]gg]cb" H\U'h]g'z'U'gh'XY'bhk '\c'gi Va]hg
Ub'Ugg][ba Ybhk]h'U'g'h]di 'UH'X'XY'UX']b'Y'cZ(. \$\$da 'cb'%' 'A Um'&\$%' 'Uh(. \$\$da 'cb'%' 'A Um'&\$%'
k]']b'W'f'U'XY'Xi W]cb'cZ%'\$i "

HUg_'k]h'U'bc'b d'Y'f'W'b'U]Y'a U'f'_

Z'h'Y'HUg_]g'a U'f'_Y'X'ci hc'Z&) z'h'Y'b'UH'gi Va]gg]cb'k]' 'U'h'f'U'W'hi'U'd'Yb'U'm'c'Z'U'XY'Xi W]cb'cZ%'&) Z'ca 'h'Y'
a U'f'_Uk U'f'Y'X'hc'h'Y'g'h]XY'bh'Zcf'Yj Y'f'm'&(!\ci f'd'Y'f]c'X'f'c'f'd'U'f'h'Y'f'Y'c'Z'd'U'gh'h'Y'g'h]di 'UH'X'XY'UX']b'Y"

- K cf_gi Va]hYX %\$'hc %- 'XUmg 'UZhf'h'Y'gh]di 'UhYX'XYUX`]bY'k]''VY'UggYggYX'UbX'ZYXVUW_dfcj]YX'Vi hU'a Uf_cZnYfc'k]''VY'fYWcfYX'Z'hY'k cf_k ci 'X'\Uj Y'fYW]j YX'U'dUgg'a Uf_Vi hZcf hY''UhY'bYgg'UbX'hY'k cf_]g'U'Wta di `gcfmWci fgY'Wta dcbYbhfli fX'Y'fYei]fYa YbHžU'ghi XYbhk]''VY'XYYa YX'hc'\Uj Y'a Yh'hUhfYei]fYa Ybh'
- K cf_gi Va]hYX &\$'cfa cfY'XUmg 'UZhf'h'Y'gh]di 'UhYX'XYUX`]bY'k]''bchVY'UWW'dhYX'Zcf UggYgga YbhUbX'k]''fYW]j Y'bc'ZYXVUW_ž'a Uf_cf[fUXY''Z'hY'UggYgga YbhUg_]g'U'Wta di `gcfm Wta dcbYbhcZ'hY'Wci fgY'U'ghi XYbhk]''fYW]j Y'Ub'l bgUhgZUWcfm: U]'fl : Ł'[fUXY'Ug'U'fYgi `hcZ i bgUhgZUWcfmdYfZcfa UbVW`]b'Ub'YggYbh]U'Wta dcbYbhcZ'hY'Wci fgY''

H\]g`]bZcfa Uhcb`]g'U'gc'Uj U]UV'Y'Uh

[\hdg.##k k k "Ufng"i bgk "YXi "Ui #W ffYbHghi XYbng#JWJXYa \]W\]bZcfa Uhcb#dfchWc`g!\[i \]XY`\]bYg#](#)

5 WUXYa]W<c bYghmUbX`D`U[]Uf]ga

D`U[]Uf]ga `]g`i g]b[`hY`k cfXg`cf]XYUg`cZchYfg`UbX`dfYgYbh]b[`hYa `Ug`mci f`ck b" `hWUb`hU`Y`a Ubm
Zcfa gZ`Zca `XY`]VYfUHY`WXYU]b[`hc`UWV]XYbhU`mW`dm]b[`Zca `U`gci fW`k]h`ci hUW_bck`YX[Ya Ybh`

I BGK `[fci dg`d`U[]Uf]ga `]bhc`hY`Zc`ck]b[`WUHY[cf]Yg.

7 cdm]b[.`i g]b[`hY`gUa Y`cf`j Yfmg]a]Uf`k cfXg`hc`hY`cf][]bU`hYI hcf`]XYU`k]h`ci hUW_bck`YX[]b[`hY`
gci fW`cf`i g]b[`ei chU]cb`a Uf_g`"H\]g`U`gc`Udd`]Yg`hc`]a U[YgZ`UfhUbX`XYg][b`dfc`YWgZ`Ug`k Y`Ug
dfYgYbhU]cbg`k \YfY`gca YcbY`dfYgYbh]g`UbchYf`g`]XYUg`cf`k cfXg`k]h`ci hWYX]h`

hUddfcdf]UHY`dUfUd`fUg]b[.`7`Ub[]b[`U`ZYk `k cfXg`UbX`d`fUgYg`k \]Y`a cghmifYU]b]b[`hY`cf][]bU`
ghfi W`i fY`UbX`#`f`dfc[fYgg]cb`cZ]XYUg`cZ`hY`cf][]bU`Z`UbX`]bZcfa U]cb`k]h`ci hUW_bck`YX[Ya Ybh`H\]g`U`gc
Udd`]Yg`]b`dfYgYbhU]cbg`k \YfY`gca YcbY`dUfUd`fUgYg`UbchYf`g`]XYUg`cf`k cfXg`k]h`ci hWYX]hUbX`hc
d]YW]b[`hc[YhYf`ei chYg`UbX`dUfUd`fUgYg`]bhc`U`bYk `k \c`Yz`k]h`ci hUddfcdf]UHY`fYZYfYbW]b["

7 c`i g]cb. `k cf_]b[`k]h`chYfg`Vi hdUgg]b[`cZ`hY`k cf_]Ug`U`dYfgcb`g`]bX]j]Xi U`k cf_"`7 c`i g]cb`U`gc

- i bXYfghUbx'mci f'f][\hg'UbX'fYgdcbg]V]]hYg'Ug'U'gh XYbhUhl BGK
- VY'Uk UfY'cZd'U[]Uf]ga ž'Wcdmf][\hžI BGK 'Gh XYbh7cXY'cZ7cbXi WñUbX'5WwdfUV'Y'I gY'cZ I BGK '⇒H'F Ygci fW'g'Dc`]Wñ
- VY'Uk UfY'cZñY'ghUbXUfXg'cZVY\Uj]ci f'YI dYWñX'cZYj Yfmcby']b'hY'I BGK 'Wca a i b]m
- `cWñH'gYfj]Wg'UbX']bZcfa Uñcb'UVci hl BGK 'UbX'I BGK '@]VfUfm

Gca Y'cZñYgY'UfYUg'k]`VY'ZJa]]Uf'hc'mci žcñYfg'k]`VY'byk "; U]b]b['U'gc`X'i bXYfghUbx]b['cZU`ñY fY'UH'X'UgdYWñ'cZ9@G9'k]`Y'd'mci 'a U_Y'hY'a cghcZmci f'gh X]Yg'Uhl BGK "

[f\hd.#gi.VYWfi \]XYg" \]VfUfmi bkg "YXi "Ui #'\]gY#UVci h' \]gYŁ](#)

7 ci fgY'GWXYXi `Y

[J\]yk`WUgg`hja`YhUV`Y](#)

H]ja`YhUV`Y`

8UhY	HmdY	7cbhYbh
K YY_%&'>i`m!&`>i`m	@YWh fY	@YWh fY.`H\i fgXUmž`*>i`mž`Uh%`\$\$da`!` "\$\$da`]b`K`YVghYf;`%+` -b]fcXi`W]cb`hc`h`Y`7`ci`fgY`/\]g]hc]f]WU`W`b]h]l`hg`Z`c`f`a`i`g]W]UbX`j`]gi`U`]a`U[`Yg`/UX`j`Yb]hcZ]Z`a`/i`gY`cZ`a`i`g]W]b`YUf`m`g]Yb]h`Z]a`/Z]a`a`i`g]W]UbX`F`ca`Ub]h]W]ga`ž`a`i`g]W]UbX`W]W]A`" 8]gW`gg`5W]j`]m`i`%` D`Y`UgY`b`c]h`Y`Hi`hc]f]U`g`VY[`]b`]b`K`YY_`&` .
K YY_&.`\$>i`m!)`5i`[i`gh	@YWh fY	@YWh fY.`H\i fgXUmž`\$&`5i`[i`ghž`Uh%`\$\$da`!` "\$\$da`]b`K`YVghYf;`%+` 5W]j`]m`i`%`Xi`Y`hcXUm` A`i`g]W]b`bcb!<c`nk`ccX`g]Yb]h]Z]a`g/` 5X]Yb]hcZ`gci`bX`cb`Z]a`g`n]b]W]fcb]g]U]cb`cZa`i`g]W]UbX`]a`U[`Y`/a`i`g]W]UbX`X]U`c`["`
	Hi`hc]f]U`	Hi`hc]f]U`.`H\i fgXUmž`\$&`5i`[i`ghž`Uh` "\$\$da`!` ("\$\$da`]b`K`YVghYf;`%+` %`&`!%`'`&!`k` \YfY`]g`h`Y`a`i`g]W]B`DfUW]W]U]h]Yg`]b`gci`bX` fY`W`c]f]X]b[`ž`UbX`a`]l`]b[`c`ZX]U`c`[i`Yž`a`i`g]W]ž`gci`bX`Y`Z`Y`W]g`"
K YY_`.`*`5i`[i`gh!`%&`5i`[i`gh	@YWh fY	@YWh fY.`H\i fgXUmž`\$-`5i`[i`ghž`Uh%`\$\$da`!` "\$\$da`]b`K`YVghYf;`%+` H`Y`f7`Ugg]WU`f]k`c`nk`ccX`Z]a`g`W`c]fY`-`A`U]`G]H]b]Yf`UbX`9f]W]`?`cfb[`c`X`"
	Hi`hc]f]U`	Hi`hc]f]U`.`H\i fgXUmž`\$-`5i`[i`ghž`Uh` "\$\$da`!` ("\$\$da`]b`K`YVghYf;`%+` G`W`c]f]b[`U`g`W]bY`X]gW`gg]cb`cZ5W]j`]m`&`UbX` \ck`hc`W`c]a`d`Y`H`]h`"
K YY_(`.`%`5i`[i`gh!`%`5i`[i`gh	@YWh fY	@YWh fY.`H\i fgXUmž`%`5i`[i`ghž`Uh%`\$\$da`!` "\$\$da`]b`K`YVghYf;`%+`

		5Wj]m&:Xi Y" :]a 'Bc]f/XYj Y'cda Ybhg]b'a i g]WU''Ub[i U[Y'UbX]bgfi a YbhU]cb'Zcf'Z'a 'a i g]W
	Hi hcf]U'	Hi hcf]U'.H\i fgXUmž%'5i [i ghžUh' "\$\$da '!('\$da]b'K YVghYf; %+" :]a 'A i g]WH\YcfmDUfh%'5Xcfbc'UbX'9]gYf/ UbU'mg]b['Z'a 'a i g]WUbX'Ya ch]cb.']b!WUgg'UbU'mg]g cZgY'YVWYX'gWYbYg"
K YY_) .&\$'5i [i gh! '&*'5i [i gh	@YWh fY	@YWh fY'.H\i fgXUmž'&'5i [i ghžUh%'\$\$da '! '\$da]b'K YVghYf; %+" 9`YWfcb]Wa i g]W]b'Z'a . 'DUfh%" A i g]WUbX'G]YbWY"
	Hi hcf]U'	Hi hcf]U'.H\i fgXUmž'&'5i [i ghžUh' "\$\$da '!('\$da]b'K YVghYf; %+" : i fhYf']bbcj U]cbg]b'Z'a 'a i g]W'6YfbUfX <Yffa Ubb'Ug'WUgY'gh Xn"
K YY_)*. '&+'5i [i gh! '&'GYdhYa VYf	@YWh fY	@YWh fY'.H\i fgXUmž'\$'5i [i ghžUh%'\$\$da '! '\$da]b'K YVghYf; %+" .
	Hi hcf]U'	Hi hcf]U'.H\i fgXUmž'\$'5i [i ghžUh' "\$\$da '!('\$da]b'K YVghYf; %+" .
K YY_)+. 'GYdhYa VYf!'-'GYdhYa VYf	@YWh fY	@YWh fY'.H\i fgXUmž\$*'GYdhYa VYfžUh%'\$\$da '! ' "\$\$da]b'K YVghYf; %+" 7ca d]YX'gWcfYg'fdcdi 'Uf'a i g]W/7'Ugg]WU':]a gWcfY'fYj]j U"
	Hi hcf]U'	Hi hcf]U'.H\i fgXUmž\$*'GYdhYa VYfžUh' "\$\$da '! ('\$da]b'K YVghYf; %+" =b!7'Ugg'HYghfcb'U''a UHf]U'X]gW ggYX']b'K YY_g %*Ł/() 'a]bi hYg"
K YY_) . '%\$'GYdhYa VYf!'%'GYdhYa VYf	@YWh fY	@YWh fY'.H\i fgXUmž%'GYdhYa VYfžUh%'\$\$da '! ' "\$\$da]b'K YVghYf; %+" 9`YWfcb]Wa i g]W]b'Z'a . 'DUfh&"
	Hi hcf]U'	Hi hcf]U'.H\i fgXUmž%'GYdhYa VYfžUh' "\$\$da '! ('\$da]b'K YVghYf; %+" :]a 'A i g]WH\YcfmDUfh&.'; cfVa Ubž? U']bU_ž K U'_Yf'UbX'chYfg"
K YY_) - . '%+'GYdhYa VYf!'	@YWh fY	@YWh fY'.H\i fgXUmž&\$'GYdhYa VYfžUh%'\$\$da '! ' "\$\$da]b'K YVghYf; %+" .

F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

F YWca a YbXYX`F Ygci fWg

<]W_a Ub. `DWW? ge[U, # " KWSde aX8[_ ? ge[U fB cftcbž&\$\$) E" H\]g`]g`bchiU`Wca di `gcfmHYI hiZcf`h]g
Wci fgYž]h]g`a YfY`mU`gi [[YghYX`fYgci fW`hUhVcbhU]bg`i gYž ``UXX]hcbU`]bZcfa Uhcb`cb`Wci fgY`WcbhYbh`

Gi [[YghYX`F YUX]b[`@]gh

5bXYfgcbž; ""? ge[U Xade[W fX^_ eł #* +&ž#+\$+, S Yg[VW`K Ug\]b[hcb. `@VfUfmcZ7 cb[fYggž%- , , "

6fcd\mž`D""fYX"É"5 [Wea` [U, W] bWd[W U[Y fZWeag` VfdSU] /B cfh`F mXYžB"G"K ". `5i ghfU`]Ub:]a `HY`Yj]g]cb
UbX`F UX]c`GWkcc`ž&\$\$%"

6fi Wž; "4Wd SdV : Wd_ S` ` , S` V ` SdSf[hW`fBbb`B`Vaf`A [W]Y]Sb, `GA `=D`WgVSDW`B`Wggž%+,*) ž

6i \Yfž>": `]bbž7"UbX`BYi a YmYfž8" fYXg"É? ge[U S` V U[W_ S/< Ubcj YfžB"< " ! `@cbXcb. `l b]j Yfg]m
DfYgg`cZBYk `9b[`UbXž&\$\$%"

6i fž; "žFZW3df aX8[_ ? ge[U/6cgrcbžBcfhYUghYfb`l b]j Yfg]mDfYggž%- ("

7Uffc`žB" FZWadl [Y fZW_ ah[Y [SYW`7 Ua Vf]X[Y. `7 Ua Vf]X[Y`l b]j Yfg]mDfYggž%- - *ž`@+- %(` \$%#) Q

7c\UbžG" fYX"É": a`ki aaV _ ge[US`eł fZWX^_ dMSVWd`BYk `Mcf_ `F ci hYX[Yž&\$\$&"

7cbf]Wkž=UbX`H]bW_bY`ž9`fYXg"É"8[_ e _ ge[US^_ a_ W fe/9X]bVi f[\. `9X]bVi f[\`l b]j Yfg]mDfYggž
&\$\$*"

7cc_žA Yfj nb""3 : [efack aX8[_ ? ge[U/7 Ua Vf]X[Y. `7 Ua Vf]X[Y`l b]j Yfg]mDfYggž&\$\$, ž`@+, %) (&\$- #) Q

7cc_žB]Wkc`Ug""3` S`ke[Y _ ge[US^_ g`fž_ W[S/C I žcfx: `C I žcfx`l b]j Yfg]mDfYgg`&\$\$ž`@+, %/#* (`6Q

7c\Ybž5">"f&\$\$É" ? ge[U Se S e#

<]`a UbžF "G` eWffŕ Y eUadWē/ ǎX]UbU`I Dž&\$\$) žŒ+- %(' \$&(#Œ Q

? U]bU_ž? "E Wffŕ Y fZWeUadW _ge[U S` V fZWU`See[US^: a^ki aaV X^ -A UX]gcb. l b]j Yfg]hmcZK]gWēbg]b
DfYggž% - &žŒ+, %) (&\$- +' #&Œ Q

? Uf]bž: "UbX`K f][\žF "žA` fZWF dSU], 3 9 g[VWfa 5 a` fW_ badSck 8[^ E Uadŕ Y/BYk `Mcf_ `F ci hYX[Yž
&\$\$("

? UggUV]Ubž5": Wsdŕ Y X^, fdSU] [Y [VW f[XUSf[a` e [Ua` fW_ badSck : a^ki aaV X^ _ge[U/BYk `Mcf_
F ci hYX[Yž&\$\$%žŒ+, %) (&#%Œ Q

A Uf_gžA "A "ž? ge[U S` V fZWe[W f X^, Ua` fW] fe S` V USeWefgV[Wēl #* +' ž#+\$&/BYk `Mcf_!C Q

6cX]Yg/ 'bHYfZJWg'&\$%*

7F ⇒CG

7F ⇒CG'Dfcj]XYf'7cXY.'\$\$\$- ;