

5 W hi b ['5 i hc ZU\fYf.'; YZÀ\f`]W Yf'CdY` A Yf]j U'gcf[h'ZØf'7\Ucg'Ui Z'6) %

5a %%"\$, "&\$&(`_Ua `Yg`Ui Z`XYf`6) %`nk]gW\Yb`Hf]Yf`i bX 6]hVi f[`ni `[YZÀ\f`]W\Ya `: U\fj Yf\U`hYb`Y]bYg`C dY``A Yf]j U" NYi [Yb`[Ygi W\h°

± XYf'B UW\h'ni a '&%"'5i [i gh'&\$&(ž'[Y[Yb'&&.(+'I\fž'k i fXY'Ui Z XYf'6i b XYgghfU» Y'6) %'nk]gW\Yb'Hf]Yf'i b X'6]hVi f['Y]b

VYi bfi \][Yb XYf'J cfZU``'j YfnY]W\bYh"'9]b'V`Ui Yf'C dY``A Yf]j U

gcf[hY'XUVY]'ZØf'Yf\YV`]W\Y'J Yf_Y\fg[YZÀ\fXi b[Ybž']bXYa 'XUg

: U\fnYi [']a a Yf'k]YXYf']b'XYb'; Y[Ybj Yf_Y\f'[Yf]Yh"'NYi [Yb

VYf]W\hYhYbž'XUgg'UbXYfY'J Yf_Y\fghY]`bY\a Yf'[Ynk i b[Yb'k UfYbž

UVfi dh'ni 'VfYa gYb'i bX'Ui gni k Y]W\Ybž'i a '?c``]g]cbYb'ni

j Yfa Y]XYb"

8 Yf J cfZU```\ Uh'X]Y '5i Za Yf_gUa _Y]h'XYf 'Dc`]nY]'Ui Z'g]W\ [Ync [Ybž X]Y 'bi b'i a 'A]h\]`ZY 'XYf'² ZZYbh`]W\ _Y]h'V]hhYh'' \dig gV YgcbXYfY 5bk c\bYf'i bX'UbXYfY: U\fnYi [ZØ\fYfž'X]Y 'a Ò[`]W\Yfk Y]gY ; YgW\AX][hY 'XYg'9fY][b]ggYg'k i fXYbž'g]bX'Ub[Y\U`hYbž'g]W\ 'a]h XYf 'Dc`]nY]]bgdY_h]cb'6]hVi f[']b'J YfV]bXi b['ni 'gYhnYb'' 8]Y 'Dc`]nY]\cZhž'Xi fW\ 'k Y]hYfY 'NYi [YbUi ggU[Yb'Y]b'_`UfYfYg'6]`X'XYf G]hi Uh]cb'[Yk]bbYb'ni '_ObbYb''

Dc`]nY]`]WXY'9fa]hh`i b[Yb

8 Yf'6YfY]WX 'nk]gWX Yb 'Hf]Yf'i bX'6]hVi f['k]fX'fY[Y`a À»]['j cb J Yf_Y\fghY]`bY\a Yfb 'ZfYei Ybh]Yfhž'i bX'Y]b 'gc`WX Yg'f]g_UbhYg J Yf\U`hYb'\]bhYf`Àggh'bUhØf`]WX '6Ygcf[b]g"'8]Y'Dc`]nY]]bgdY_h]cb 6]hVi f['\Uh'VYfY]hg'YfghY'A U» bU\a Yb'Yf[f]ZZYbž'i a 'X]Y I a ghÀbXY'ni '_`ÀfYb"'G]Y'Yfa i h][h'YXYbž'XYf'\Dzcfa Uh]cbYb'ni XYa 'J cfZU```\Uhž'g]WX'i bhYf'XYf'HY`YZcbbi a a Yf'\$*) * %!- *,) \$`ni

a Y`XYb"'8]Y'A Ò[`]W_Y]hž'Ubcbma 'ni 'V`Y]VYbž'VYghY\h'YVYbZU``gž k Ug'ZØf'j]Y`Y'A YbgW\Yb'Y]bY'9f`Y]W\hYfi b['XUfghY``Yb'_Ubb"

 $8] Y ``6i b X Y g g h f U * Y ``6) \% `k] f X ``g h U f _`Z f Y e i Y b h] Y f h ž ``] b g V Y g c b X Y f Y ``j c b D Y b X ``Y f b ``i b X ``F Y] g Y b X Y b ž X] Y ``nk] g W Y b ``X] Y g Y b ``V Y] X Y b ``G h A X h Y b i b h Y f k Y [g ``g] b X Y f U f h] [Y g `: U \ f j Y f \ U `h Y b ``[Y Z A \ f X Y h `b] W h 'b i f X] Y ``G] W Y f \ Y] h X Y f ``U b X Y f Y b ``5 i h c Z U \ f Y f ž g c b X Y f b ``g h Y ``h ``U i W ``Y] b F] g] _ c ``Z Ø f :: i * [A b [Y f ``i b X ``F U X Z U \ f Y f ``X U f ž ``X] Y ``a `O [``] W X Y f k Y] g Y Y Y Y b Z U ``g ``] b ``X Y f ``B A \ Y ``X Y f ``G h f U * Y ``i b h Y f k Y [g ``g] b X "$

$K \]WX h][\ Y ? c b hU_hY ZØf <]b k Y]gY$

K Yf' ≠ Zcfa Uh]cbYb'ni 'X]YgYa 'J cfZU```\ Uh'cXYf'a Ò[`]W\Yfk Y]gY gY`Vgh'VYhfcZZYb'k Ufž'k]fX'[YVYhYbž'g]W\'a]h'XYf'Dc`]nY]]bgdY_h]cb 6]hVi f[']b'JYfV]bXi b['ni 'gYhnYb"'8]Y'?cbhU_hXUhYb'g]bX'k]Y Zc`[h.

6Y\ÒfXY	5 X f Y g g Y	HY`Y Zc b	9!A U]`
Dc`]nY]]bgdY_h]c	9fXcfZYf GhfU» Y	\$*) *%!-*,)\$	d]V]hVif[4dc`]
b.6]hVif[%\$ž ⁻) (* ' (nY]"f`d"XY
	6]hVi f[

JcfZÀ``Y'k]Y'X]YgYf'nY][Yb'XYih`]W\ž'k]Y'k]W\h]['Yg']ghž jYfUbhkcfhib[gVYkiggh'5ihc'ni'ZU\fYb"'5[[fYgg]jYg : U\fj Yf\U`hYbž'XUg'UbXYfY'JYf_Y\fghY]`bY\a Yf'[YZÀ\fXYhž'gc``hYb]Ya U`g'hc`Yf]Yfh'k YfXYb"'8]Y'Dc`]nY]'gYhnh'g]W\XXUZØf'Y]bž'gc`W\YJcfZÀ``Y'ni 'fYXi n]YfYb'i bX'X]Y'JYf_Y\fgg]W\Yf\Y]h'ZØf'U``Y'ni [Yk À\f`Y]ghYb"

<]bhYf[fi bX]bZcfa Uh]cbYb ni f J Yf_Y\fgg]WXYf\Y]h</pre>

 $8]Y'6) \% Z'Ui Z'XYf'XYf'JcfZU```ghUhhZUbX Z']gh'Y]bY'k]W h][Y'6i bXYgghfU YZ'X]Y'Xi fW '`AbX`]W Y'; YV]YhY'Z A\fhi bX'Z fhi bX'Z fj]Y'Y DYbX`Yf'i bX'@_k!JYf_Y\f'j cb'6YXYi hi b[']gh''8Yf'Ni ghUbX'XYf GhfU Yb'i bX'X]Y'9]b\U`hi b['XYf'JYf_Y\fgj cfgW f]Z hYb'Ui Z'gc`W Yb GhfY W_Yb'\UVYb'[fc Y'5i gk]f_i b[Yb'Ui Z'X]Y'G]W Yf\Y]h'' <math display="block">FY[Y`a A Y][Y'?cbhfc``Yb'i bX'X]Y' = bghU``Uh]cb'j cb JYf_Y\fgg]W Yf\Y]hga U Yb U\a Yb Z'k]Y (YgYbh`]W YGW f]hhY'ni f FYXi n]Yfi b['j cb'; YZU\fYb'']$

GhUh]gh]_Yb ni a : U\fj Yf\U`hYb

5_hi Y``Y`I a ZfU[Yb'i bX'Ghi X]Yb'nY][Ybž'XUgg'j]Y`Y

JYf_Y\fghY]`bY\a Yf'g]W\'XYf'; YZU\fYb']a 'GhfU»Ybj Yf_Y\f'b]W\h

Ui gfY]W\YbX'VYk i ggh'g]bX"'9]bY'I a ZfU[Y'XYg'8Yi hgW\Yb

JYf_Y\fgq]W\Yf\Y]hqfUhYq'f8JFŁ'Yf[UVž'XUqq'ØVYf'(\$`i 'XYf

6YZfU[hYb^[`Ui VYbžbUW\^Y]bYa ^5`_c\c`[Ybi gg^bcW\^ZU\fZ\]['ni gY]bž'k Ug^ni ^Y]bYa ^Yf\YV`]W\Yb^G]W\Yf\Y]hgf]g]_c^ZØ\fYb^_Ubb"

8 UfØVYf`\]bUi g`nY][Yb`GhUh]gh]_Ybž`XUgg`5V`Yb_i b[`Ua `GhYi Yfž]bgVYgcbXYfY`Xi fW\`Ga Ufhd\cbYgžY]bY`]a a Yf`[fÒ» YfY`Fc``Y`VY]
J Yf_Y\fgi bZÀ``Yb`gd]Y`h"`@Ui h`Y]bYf`Ghi X]Y`XYg`\pgh]hi hg`ZØf
J Yf_Y\fgg]W\Yf\Y]hii bX`I bZU``ZcfgW\i b[`f\GI J \perpresetting]bX`5V`Yb_i b[Yb
Y]b`: U_hcf`VY]`Yhk U`Y]bYa `J]YfhY``U``Yf`gW\k YfYb
J Yf_Y\fgi bZÀ``Y"`8]Y`GYbg]V]`]g]Yfi b[`XYf`6Yj Ò`_Yfi b[`ZØf`X]YgY
H\Ya Yb`]gh`gca]hii bYf`Agg`]W\žii a `X]Y`G]W\Yf\Y]h`Ui Z`XYb
GhfU» Yb`ni `ZÒfXYfb"`

8]Y Fc``Y XYf NYi [Yb]a J Yf_Y\fgi bZU``

8]Y'Dc`]nY]'UddY``]Yfh'fY[Y`a À»]['Ub'NYi [Ybž:g]W\'ni 'a Y`XYbž'i a X]Y'Yfa]hhY`bXYb'6Y\ÒfXYb'ni 'i bhYfghØhnYb"'8]Yg'_Ubb
VYgcbXYfg'k]W\h]['gY]bž'kYbb'Yg'i a 'X]Y'\Rightarrow XYbh]Z]n]Yfi b['j cb | bZU``i fgUW\Yb'[Y\h'cXYf'i a 'X]Y'G]W\Yf\Y]h'UbXYfYf
JYf_Y\fghY]`bY\a Yf'ni '[Yk À\f`Y]ghYb"'9]bY'gc`W\Y
Ni gUa a YbUfVY]h'nk]gW\Yb'XYf'Dc`]nY]'i bX'XYb'6Øf[Yfb'hfÀ[h'ni fU``[Ya Y]bYb'JYf_Y\fgg]W\Yf\Y]h'VY]'i bX'_Ubb'\Y`ZYbž'À\b`]W\Y
JcfZÀ``Y']b'XYf'Ni _i bZh'ni 'j Yf\]bXYfb"

8 Y hU]`a