

HÒX`]WXY'Dc`]nY]gWXØggY']b FYW_`]b[\Ui gYb.'9]b'kY]hYfYf'JcfZU`` YfgWXØhhYfh'BFK

±0 FYW_`]b[\Ui gYb'_Ua 'Yg'ni 'Y]bYa 'hfU[]gWXYb'JcfZU``ž'VY]'XYa Y]b'a i ha U» `]WXYf'A YggYfUb[fY]ZYf'VY]'Y]bYa 'Dc`]nY]Y]bgUhn'i a g @YVYb'_Ua "'5b'VYgU[hYa 'A]hhk cWXUVYbX'k Uf'Y]b'''!'À\f][Yf A Ubb']b'Y]bYa 'A Y\fZUa]`]Yb\Ui g'i bhYfk Y[g'i bX'j Yf\]Y`h'g]WX YI hfYa 'U[[fYgg]j "'NYi [Yb'VYf]WXhYhYbž'XUgg'Yf'Y]b'A YggYf'VY] g]WX 'ZØ\fhY'i bX'X]Y'G]hi Uh]cb'ZØf'X]Y'U'Ufa]YfhYb'Dc`]n]ghYb Ài »Yfgh'[YZÀ\f`]WX'k i fXY"

8]Y'6YUa hYbž'X]Y'Ui g'8cfha i bX'i bX'XYf'6cW\i a Yf
GhUUhgUbk U`hgW\UZh'U`Ufa]Yfh'k i fXYbž'gU\Yb'g]W\'VY]a '9]bhfYZZYb
gcZcfh'Y]bYf'6YXfc\i b['Ui g[YgYhnh"8]Y'[YbUi Yb'I a ghÀbXY'XYg
GW\i ggk UZZYb[YVfUi W\g'gck]Y'X]Y'5bnU\`'XYf'Ubk YgYbXYb
Dc`]nY]VYUa hYb'g]bX'XYfnY]h'bcW\'i b_`Ufž'XU'X]Y'9fa]hh`i b[Yb
j cb'XYf'?f]a]bU`dc`]nY]']b'8cfha i bX'ØVYfbca a Yb'k i fXYbž'i a
j Ò``][Y'BYi hfU`]hÀh'ni '[Yk À\f`Y]ghYb"'8Yf'A Ubb'Yf`]hh'bUW\
Dc`]nY]Ub[UVYb'ZUhU`Y'JYf`Yhni b[Yb'i bX'jYfghUfV"

Ni gUa a Yb\Ub[a]hk Y]hYfYb JcfZÀ``Yb

8]YgYf'JcfZU```]gh'HY]``Y]bYf'VYgcf[b]gYffY[YbXYb'FY]\Y'À\b`]W\Yf 9fY][b]ggY']b'BcfXf\Y]b!K YghZU`Yb"'Bif'Y]bYb'HU['nijcf'kifXY']b AcYfg'Y]b'&*!'À\f][Yf'AUbbž'XYf'YVYbZU``g'a]h'AYggYfb VYkUZZbYh'kUfž'XifW\Dc`]nY]gW\ØggY'[YhÒhYh"'8]YgYf'JcfZU`` YfY][bYhY'g]W\ž'bUW\XYa'XYf'AUbbž'cZZYbVUf'dgmW\]gW\'UiZZÀ``][ž DUggUbhYb'Ub[Y[f]ZZYb'i bX'VYXfc\h'\UhhY"'<]YfVY]'k i fXY'Yf'j cb XYb'6YUa hYb'U`g'U_i hY'6YXfc\i b['ZØf'X]Y'² ZZYbh`]W_Y]h k U\f[Ybca a Ybž'k Ug'ni f'ZUhU`Yb'5bk YbXi b['j cb'GW\i ggk UZZYb ZØ\fhY"

Ni gÀhn`]W\`ni `X]YgYb`JcfZ\``Yb`ghY\h`X]YgY`FY]\Y`jcb; Yk U`hhUhYb]a `?cbhYl h`Y]bYg`a i ha U \Rightarrow `]W\`]g`Ua]gh]gW\`a ch]j]YfhYb`5b[f]ZZg`]bGc`]b[Ybž`VY]`XYa `gW\`]Y \Rightarrow `]W\`XfY]`A YbgW\Yb`[YhÒhYhii bX`UW\hkY]hYfY`j Yf`Yhnh`k i fXYb"`8Yf`H\hYf`X]YgYg`5b[f]ZZgž`Y]b&*!^\ha\f][Yf`GmfYfž`VYZ]bXYh`g]W\`XYfnY]h`]b`l bhYfgi W\i b[g\UZh''8]YgY`9fY][b]ggY`nY][Yb`Y]bYb`VYi bfi\][YbXYb`HfYbX`]b`XYfFY[]cb`i bX`k YfZYb`: fU[Yb`ni f`\hat{O}ZZYbh`]W\Yb`G]W\Yf\Y]h`Ui Z''

Dc`]h]gWXYFYU_h]cbYb

8]Y'ghY][YbXY'NU\`jcb; Yk U`hhUhYb'i bX', VYf[f]ZZYb'\Uh

bYba]b]ghYf'<YfVYfh'FYi `'ff781 k'ni 'gcZcfh][Ya'<UbXY`b

j YfUb`Uggh"5a 'A]hhk cW\'dfÀgYbh]YfhY'Yf'Y]b'NY\b!Di b_hY!

Dfc[fUa a ži a 'X]Y'k UW\gYbXY'A YggYf[Yk U`h']b'BcfXf\Y]b!

K YghZU`Yb'ni 'VY_Àa dZYb"'@Ui h'Y]bYa 'bYi Yb'@U[YV]`X'\Uh'X]YgY

]a ``YhnhYb'*\f']a 'OZZYbh`]W\Yb'FUi a 'i a 'YfgW\fYW_YbXY'('

DfcnYbh'ni [Ybca a Yb'i bX'nÀ\`h'bi b'' ") (\$': À``Y"

DUfU``Y``ni `X]YgYb`9bhk]W_`i b[Yb`Xcn]Yfh`X]Y`Dc`]nY]`]b

FYW_`]b[\Ui gYb`X]Y`: YghbU\a Y`Y]bYg`(-!^À\f][Yb`A UbbYgž`XYf
Y]bYb`)'!*À\f][Yb`a]h`Y]bYa `A YggYf`j Yf`Yhnh`\UhhY"@YhnhYfYf
kifXY`nif`6Y\UbX`ib[`]bg`?fUb_Yb\Ui g`[YVfUW\hž`k À\fYbX`XUg
HUha YggYf`g]W\Yf[YghY``h`k YfXYb`_cbbhY"`8]YgY`JcfZÀ``Y`ghY``Yb
b]W\h`bif`X]Y`Dc`]nY]ž`gcbXYfb`Ui W\`X]Y`[YgUa hY`; YgY``gW\UZh`jcf
[fc»Y`<YfUi gZcfXYfi b[Ybž`k Ug`XYb`I a [Ub[`i bX`X]Y`DfÀj Ybh]cb
icb`; Yk U`h`Ub[Y\h"

8]YFØW_Y\fini Y]bYa; YZØ\``XYfG]W\Yf\Y]hi]b`XYb`GhÀXhYb
YfZcfXYfhY]b`[YaY]bgUaYg`9b[U[YaYbhij]Y`Yf5_hYifYž'XUg
gckc\``dfÀjYbh]jY`AU»bU\aYb`U`g`UiW\Y]bY`JYfVYggYfib[`XYf
Dc`]nY]UfVY]hiiaZUggh" + 5bVYhfUW\h`XYf`U_hiY``Yb`G]hiUh]cb`]gh`Yg
ibYf`Àgg`]W\ž'XUg`JYfhfUiYb`XYf`6Øf[Yf]b`X]Y`G]W\Yf\Y]hg_fÀZhY
k]YXYf\YfnighY``Yb`ibX`[`Y]W\nY]h][`XYb`VYhfcZZYbYb`DYfgcbYb

 $\label{thm:continuous} \begin{tabular}{ll} Ub[Ya YggYbY'<]`ZY'i bX'l bhYfghØhni b['Ubni V]YhYb"'8i fW\'X]YgYhfU[]gW\Yb'9fY][b]ggY'k]fX'XYi h`]W\ž'k]Y'k]W\h]['Yg']ghž'gW\bY``i bX'YZZY_h]j'[Y[Yb'; Yk U`h'j cfni [Y\Yb"$

8 YhU]`g

6Ygi WXYb G]Y i bg Ui Z. b!U["XY