

8]Y`F Y]gYž`X]Y`a]W\`j YfÀbXYfh`\Uh.`>]b] F YXXm

J ca`HfY__]b[`]b`BYdU`V]g`\]b`ni f`9f_i bXi b[`XYg`fUb`i bX
DU_]ghUbg`i bhYf\À`h`i bg`X]Y`5i hcf]b`>]b]`F YXXmia]h
; YgW\]W\hYb`ØVYf`X]Y`F Y]gYbž`X]Y`g]Y`j YfÀbXYfh`\UVYb
K Ybb`Yg`Ya U`g`Y]bY`[Y\Y]a b]gj c``Y`]bhYfbUh]cbU`Y` : fUi
[Y[YVYb`\ÀhYž`k`ÀfY`g]Y`k U\fgW\Y]b`]W\`>]b]`F YXXmigY\f
À\b`]W\`[Yk YgYb``5`g`Vf]h]gW\Y`5i hcf]b`i bX`æi fbU`]gh]b`\Uh
>]b`]b`@cbXcbž`A cbhfYU`ž`<cb[_cb[žXYf`Dfcj YbW`i bX`H]Z]g
[Y`YVh`U`h1 / Ua d/ , &&\$/5i hcf]b`>]b]`F YXXm
`ÀW\Y`h` Ua d/ , &&\$// [h`G]Y`]ghi bhYf`VYk UZbYhYf
6Yk UW\i b[`]b`X]Y`?U`Ug\!HÀ`Yf`]b`DU_]ghUb`[YfY]ghž`\Uh`XYb
5bbUdi fbU`7]fW`]h`Ui g`Y]bYf`@Ui bY`\YfUi g`UVgc`j]Yfh`i bX
g]W\`]b`Y]bYa `A`ÀbbYf\Y]a `]b`XYf`Ybha`i h][YbXYb`GhUXh
8Y`\]b]YXYf[Y`UggYb``5`g`5i hcf]b`\Uh`>]b]`ZØf`/ Ua d^Y``d/

J ca`HfY__]b[`]b`BYdU`V]g`\]b`ni f`9f_i bXi b[`XYg`fUb`i bX
DU_]ghUbg`i bhYf\À`h`i bg`X]Y`5i hcf]b`>]b]`F YXXmia]h; YgW\]W\hYb
ØVYf`X]Y`F Y]gYbž`X]Y`g]Y`j YfÀbXYfh`\UVYb

K Ybb`Yg`Ya U`g`Y]bY`[Y\Y]a b]gj c``Y`]bhYfbUh]cbU`Y` : fUi
[Y[YVYb`\ÀhYž`k`ÀfY`g]Y`k U\fgW\Y]b`]W\`>]b]`F YXXmigY\f`À\b`]W\
[Yk YgYb``5`g`Vf]h]gW\Y`5i hcf]b`i bX`æi fbU`]gh]b`\Uh`>]b`]b`@cbXcbž
A cbhfYU`ž`<cb[_cb[žXYf`Dfcj YbW`i bX`H]Z]g[Y`YVh`

`U`h1` 5i hcf]b`>]b]`F YXXm`ÀW\Y`h`2

G]Y`]ghi bhYf`VYk UZbYhYf`6Yk UW\i b[`]b`X]Y`?U`Ug\!HÀ`Yf`]b
DU_]ghUb`[YfY]ghž`\Uh`XYb`5bbUdi fbU`7]fW`]h`Ui g`Y]bYf`@Ui bY
\YfUi g`UVgc`j]Yfh`i bX`g]W\`]b`Y]bYa `A`ÀbbYf\Y]a `]b`XYf
Ybha`i h][YbXYb`GhUXh`8Y`\]b]YXYf[Y`UggYb`

5`g`5i hcf]b` \Uh`>b]`Z0f`]\f`8YV0h` K]`X`H]a Yg` `Y]bYb`6f]h]g\` ; i]`X
cZ`HfUj Y`K f]hYfg`5k UfX` [Yk cbbYb`i bX`k i fXY`_0fn`]W`ni` `Y]bYf
XYf` K ca Yb`cZ`a dUWh` j cb`BUh]cbU` ; Yc [fUd\]WYfbUbbh"

≠b`]\fYa` `bYi Yb`6i W` ` K UbXYf`UbX` `_ca V]b]Yfh`>b]
BUh` fgW`fY]VYbž`dYfg0b`]W`Y`FYZYI]cb`i bX`A Ya` c]fYbž`i a` `]\fY
Gi W`Y`bUW`XYa` `A U []gW`Yb`]b`XYf`@UbXgW`UZh`Ui Zhi`nY]W`bYb`"
<]Yf`Yfn`À`h`g]Y`i bg`j cb`XYf`FY]gYž`X]Y`g]Y`j Yf`ÀbXYfh`\Uh"

K UbXYf`UbX`]gh`Y]b`Y]bn][Ufh][Yg`Gh0W_
F Y]gY`]hYfUhi` f`` : 0f`k Yb`]gh`XUg3

K UbXYf`UbX`\UbXY`h`j cb`a Y]bYf`Gi W`Y`bUW` `A U []Y`]b`XYf`
@UbXgW`UZh`"≠W`k Uf`Ub [Y`NY]h`FY]gYgW`f]ZhghY`Yf`i bX`Z0`hY`a]W`
gW`cb`]a` a Yf`j cb`A U []Y`i bX`A mgh]_Ub [Ync [Yb``≠W`k Uf`Ui W`
gY`f`]bgd]f]Yfh`j cb`A YbgW`Yb`Ui g`]bX][YbYb`?`i`hi`fYbž`X]Y`]W`Ui Z
a Y]bYb`FY]gYb` [YhfcZYb`\UhY`"G]Y`gdfUW`Yb`j cb` ; Ya Y]bgW`UZh
a]h`XYb`Ya` dZ]bXi b [gZÀ\][Yb`?f`ÀZhYb`XYf`BUh`f`i bX`]W`ZUbX`XUg
ZUgn]b]YfYbX`"≠W`k c`hY`k]ggYbž`cV`Yg`Z0f`a]W`U`g`bcfa`U`Yb
A YbgW`Yb`a 0 [`]W`k `ÀfYž`X]YgY`5fh`j cb`J YfV]bXi b [`ni`YfZU`fYb`"

≠W` `UbXYhY`Ui ZY]bYa` `n]Ya` `]W`i bcfh`cXcl Yb`K Y [`Xi`fW`
j YfgW`]YXYbY`@UbXgW`UZhYb`]b` ; fc» Vf]hUbb]Yb`i bX`\UhY
i b [Yk 0`b`]W`Y`6Y [Y [bi b [Yb`i bX`9fZU`fi b [Yb``≠W`k 0fXY
gU [Ybž`XUg`6i W`]gh`Z0f`YXYb` [YY][bYhž`XYf`g]W`Z0f`Gd]f]hi`U`]h`hž
A mgh]_ž`K UbXYfb`i bX`BUh`f`]a` `k Y]hYfYb`G]bbY`]bhYfYgg]Yfh"

≠W` `]YVY` :]_h]cb`i bX`\UVY`j Yfgi W`hž`XUfUi`g`Y]bY` ; YgW`]W`hY`ni
a UW`Yb``5i » YfXYa` `k Uf`Yg`a`]f`k]W`h][ž`XUgg`a` Y]b`6i W`
ni [`Àb [`]W`i bX`bUW`j c`n]Y`VUf`]gh`i bX`GdU`» `a UW`h`9g`dUggh
b]W`hgc`Y]bZUW`]b`Y]b` ; YbfYž`UVYf`]W`\UVY`6cl Yb`bcW`b]Y
[Ya`cW`h`≠W`\UVY`XYZ]b]h]j`b]W`h`XUg` ; YZ0`ž`]b`]f [YbXYhk`Ug`ni
dUggYb`"

K]Y` [Y`Yb`G]Y`U`g`Y`a` UbXž`XYf`Hfcgh`]b`XYf`BUh`f`
Z]bXYhž`a`]h`XYa` `@cW`Xck`b`i`a`3

≠W`\UVY`XUg` ; `0W`ž`XUgg]W`Ua` `9bXY`a` Y]bYf`GhfU`»Y`Y]bYb`

; UfhYb'i bX'Y]bYb'fi \][Yb'K U'X'\UVY" »XYb'A cf[Yb'[Y\Y']W
XcfhigdUn]YfYbži bX'a UbW a U''UggY']W'a Y]bY'5b[gh'cgž
a UbW a U'[Yb]Y» Y']W'Y]bZUW'X]YgYb'VYgcbXYfg']bhYbg]j Yb
: fØ\]b[ž'XYb'k]f'\UVYb"

'U'h1 8]Y'5i hcf]b'>b]'F YXXmZ\fh': U\ffUX 2 >b]'F YXXm>b]'F YXXm
ghY][h'Ui Z]\f': U\ffUX

⇒W'\UVY'Ui W'Y]b': U\ffUXž'k Ug'\]Zhži bX']W''YVY']b'Y]bYa 'gY\ f
[fØbYb'GhUXhY]'5VYf'b]W'h'YXYf'\UhY]bYb'; UfhYb'cXYf'K U'X
cXYf'Ni [Ub['ni 'Y]bYf'DUf'_UbXgW UZh''8 Ug'9f'YVYb'Y]bYg
@cW_Xck bg]j cb'Y]bYa ' <cW\Ui g'Ui g'YfZcfXYfh'Y]b[Ubni'UbXYfYg
A U» 'Ub'K]XYfghUbXgZ\][_Y]h"

G]Y'\UVYb'[YgU[hž'XUgg'G]Y'g]W'']b'XYf'B Uhi f
k]`_ca a Yb'ZØ\`Ybž'Yf_YbbYb'UVYf'Ui W'Ubž'XUgg
Yg'6Uff]YfYb'ZØf'A YbgW Yb'Ui g'XYf'5fVY]hYf'_UggY
i bX'DYcd`Y'cZ'7c`cf'[]Vh''K Ufi a ']gh'Yg'k]W'h][ž']b
X]Y'B Uhi f'ni '[Y\Yb3

⇒W'XYb_Yž'XUgg'X]Y'6Uff]YfYb'cZi]b'gcn]cØ_cbc a]gW Yb': U_hcfYb
j Yfk i fnY'h'g]bX''i bX'k]f'a ØggYb'X]Y'; YgW]W'hY'XYg
@UbXVYg]hYg'Ui ZXYa '@UbX'VYfØW_g]W'h][Yb' 'Yg]gh'ØVYfk]Y[YbX
k Y]» ž'b]W'h'k U\ f3'5''X]YgY'8]b[Y'k]f_Yb'g]W'Ui g'i bX'dfÅ[Yb'X]Y
K U\fbY\ a i b['j cb'c fhYb'i bX'XYb'9a dZUb[ž'XYb'G]Y
a Ø[']W Yfk Y]gY'Yf\U'hYb"

⇒W'k Uf'F Y]gYgW f]ZhghY''Yfž'U'gc'V]b']W'Yg[Yk c\ bhž'Ub'bYi Y'c fhY
ni 'fY]gYb'i bX'a]W'k]Y'Y]b'5i » YbgY]hYf'ni 'ZØ\`Ybži bX'XUa]h'V]b
]W'Y]bj YfghUbXYb''A UbW a U''UVY']W'a]W'']b'; fc» Vf]hUbb]Ybž
a Y]bYa ' ; YVi fhgc fhž'YXcW '\mdYf!g]W'hVUf'i bX'i bk c\''[YZØ\`h'
5VYf'XUg'k ØfXY'a]W'b]Y'XUj cb'UV\U'hYbž'ni 'Zc fgW Yb''i bX'X]Y
B Uhi f'i fhY]h'b]W'hž'k Y]» h'Xi 3'8]Y'6Yn]Y\i b['nk]gW Yb'⇒bYb'i bX
XYf'B Uhi f'cXYf'XYf'@UbXgW UZi'i a 'G]Y'\Yfi a ']gh'Y]bY'ni h]Y Zgh
dYfgØb`]W Y'GUW Y"

⇒W'XYb_Yž'k]f'a ØggYb'Zf]gW Y'@ Zi]b'i bgYfY '@ b[Yb'VY_ca a Yb"
8fUi » Yb'ni 'gY]b[]Vh'X]f'Y]bY'bYi Y'DYfgdY_h]j Y'i bX'XUg']gh[i h

Z0f`X]Y`dgmWk]gWk Y ; Ygi bX\Y]h" ? 0ghYbž: `0ggYž`6Yf[YžDUf_g`i bX
K]YgYb`g]bX`gWk 0bY`C fhY`ni a `J Yfk Y]`Yb" I bgYfY`GYY`Y`VfUi Wk h
GWk 0b\Y]h" ÆW`XYb_Yž`b`XYf`a cXYfbYb`K Y`h`j Yf[]ggh`a Ub`U`ni
`Y]Wk hž`XUgg`k]f`A YbgWk Yb`Y]b`HY]`XYf`B Uhi`f`g]bX"

K YbXYb`k]f`i bg`XYf`F Y]gY`ni ž`X]Y`G]Y`j Yf`AbXYfh
\Uh" K Y`Wk Y`F Y[]cb`\Uh`G]Y`Ua`a Y]ghYb
VYY]bZ`i ggh3`

Æ`6Yni [`Ui ZFY]gYbž`X]Y`a]Wk`k]f`_]Wk`j Yf`AbXYfh`\UVYbž`a 0gghY
Yg`a Y]bY`YfghY` [fc»Y`F Y]gY`bUWk`5g]Yb`gY]b" ÆW`k Uf`]b`a Y]bYb
Nk Ubn][Yfb`i bX`j Yf`Y]»`Y]bYb`[i hYb`æV`]a `J Yf`U[gk YgYbž`i a
a]Wk`ZFY]k`j`][]b`BYdU`ni`Yb[U[]YfYb" ÆW`\UhY`gY`f`j U[Y`D`AbYž
_Y]bY`?fYX]h_UfhYž) \$\$`DZ`bXž`_Y]b`HY`YZcb`i bX`_Y]bY`I bhYf`_i bZ`h"
8Yf`: fYi bX`XYg`: fYi bXYgž`j cb`XYa`]Wk`XUWk hYž`XUgg`Yf`a]Wk`Ua
: `i [\UZb`UV`c`Yb`k 0fXYž`k Uf`b]f[YbXg`ni`Z]bXYb" 8]Y`YfghYb`&
Ghi bXYb`k UfYb`Y]b`GWk`cW`Z0f`a Y]b`GmghYa`i bX`]Wk`k i fXY
gWk bY`Yfk UWk gYb`°

5a`b`AWk ghYb`HU[`_cbgi`h]YfhY`]Wk`XUg`C fU`_Y`fa Y]b`@cbY`m
D`UbYh!: 0\ fYfł`i bX`VYgWk`cggž`XYb`5bbUdi fbU`7]fW`]h`ni
k UbXYfbž`Y]bY`&%!hÀ []Y`K UbXYfi b[ž`X]Y`Y]bYb`") \$\$`a`fP%, "\$`((
: i »Ł`c`Yb`; YV]f[gdUgg`0VYfei Yfhž`Y]bYb`XYf`\0Wk ghYb`]b`BYdU`"
5`Y]bž`b]Y`a Y`f`U`g`Y]bY`K UbXYfi b[]a`DYU`8]ghf]Wk`[Ya`UWk`h"

`U`h1`6`]W`_Ui ZXYb`5bbUdi fbU`7]fW`]h`2`Nnj`Yh`#G`i`hhYfghc`W`6`]W`
Ui ZXYb`5bbUdi fbU`7]fW`]h`

; `0W`_]Wk Yfk Y]gY`[]b[]Wk`ni`Y]bYa`J`c`fhfU[`0VYf`< 0\Yb`fUb`_Y]h
i bX`a`Yf`_hYž`XUgg`]Wk`0VYfZc`fXYfh`gY]b`k 0fXY" Ni Z`À`][`hfUZ`]Wk`Ua
gY`VYb`HU[`Y]bYb`HmdYb`Ui`g`Mcf`_g\]fY`i bX`k`]f`k UbXYfhYb
ni`gUa`a`Yb" 8]YgYb`DUggž`XYb`H`c`fi b[`@Už`ni`0VYfei YfYbž`k Uf
XUg`GWk`k]Yf][ghYž`k Ug`]Wk`Ya`U`g`]b`a`Y]bYa`[`UbnYb`@VYb`[`YhUb
\UVYž`_0fdYf`]Wk`[`YgY`Yb"

Æ`6Yni [`XUfUi`Zž`k]Y`Yg`a]Wk`j Yf`AbXYfh`\Uhž`\UVY`]Wk`Y]b
[f0»YfYg`J`YfhfUi`Yb`]b`a`Y]bY`: `À`][`_Y]h`Yb`hk]W`_Y`hž`U`Y]b`]b
i bVY`_UbbhYbž`k Y]h`Yb`hZYfb`hYb`I`a`[`YVi`b[`Yb`ni`fY]gYb`i bX`Ui`Z

a]W\`gY`Vgh`Ui Zni dUggYb"

≠W\`[`Ui VYž`XYf`≠Ub`\UhhY`Ui W\`Y]bYb`[fc»Yb`9]bZi gg`Ui Z`a]W`
A Y]bY`9fZU\fi b[`ghUbX`gc`gY\`f`]a `K]XYfgdfi W\`ni `U`Ya ž`k Ug`]W
]b`XYf`DfYggY`[Y`YgYb`\UhhY`≠UbYf`g]bX`gc`k Ufa \Yfn][ž`gc
dcYh]gW\`ž`gc`YVYbg`i gh][`≠W`YVhY`X]Y`ÀbX`]W\`Yb`@UbXgW\`UZhYb
i bX`X]Y`Gh`XhY`ž`X]Y`]W\`VYfY]ghY`≠W`k Uf`hc`hU`j`YfnUi VYfh`≠W
ZØ\`Y`k]f_]W\`a]h`XYb`≠UbYfbž`X]Y`gc`YVYbg`i gh][`g]bX`i bX
XYb`bcW\`a]h`XYb`9]bgW\`f`Ab`_i b[Yb`YVYbž`X]Y`g]Y`\UVYb"

`U`h1 `9]bY`F Y]gY`]b`XYb`≠Ub`\UhhY`Y]bYb`[fc»Yb`9]bZi gg`Ui Z`b]
FYXXm 2 5bi `U`_`j]a`cc`_#G\`i hhYfghcW`_5[\U`6cncf[!A cgW\`YY`]b
? Ug\`Ubž`≠Ub

≠W`\UhhY`XUg`[`Y]W\`Y`; YZØ\``]b`DU_]ghUb``9]b`Ui »Yf[Yk Ø\`b`]W
gW\`ObYg`@UbX`j`c`Yf`k`i`bXYfVUfYfž`k`Ufa`\Yfn][Yf`A`YbgW\`Yb``≠W
VYgi W\`hY`X]Y`?U`UgW\`!HÀ`Yf`i`bX`\UhhY`VY]`X]YgYf`; Y`Y[Yb\`Y]h
Y]bY`VYk`UZZbYhY`9g`cfhYž`VYghY\`YbX`Ui`g`j`]Yf`@]V`k`ÀW\`hYfb`a`]h
?U`Ugb]_`c`j`gž`XU`VY`_`Ubb`h`k`Ufž`XUgg`X]Y`HU`]VUb`Xi`fW\`XUg`; YV]Yh
nc[Yb``≠W`Yf]bbYfY`a`]W\`ž`XUgg`Y]bYf`Y]b`nYfZYXXYfhYg`6`]X`j`cb
Df]bnYgg]b`8]UbU`\YfUi`g\`c`hY``5bgW\`Y]bYbX`k`Uf`g]Y`]b`gY]b`8cfZ
[Y[Ub[Yb`i`bX`gc`\UhhYb`g]Y`XUg`8cfZ]\`f`ni`9\`fYb`]b`8]UbU
i`a`VYbUbbh"

K`Y`W\`Y`F`Y]gY`a`ØW\`hYb`G]Y`k`]YXYf\`c`Yb`3`

≠W`k`ØfXY`[YfbY`bUW\`B`Ua`]V]U`ni`fØW`_`Y\`fYb``9g`k`Uf`Y]bY`YW\`hY
@Y`_]cb`]b`XYf`?fUZh`XYf`fUi`Ybž`k`]XYb`B`Uhi`f``9g`k`Uf`XYa`Øh][YbX`
≠W`k`ØfXY`[YfbY`Y]bY`; fi`ddY`j`cb`?]bXYfb`Ui`g`XYf`≠bYbghUXh`]b
X]YgYf`i`a`[YVi`b[`gY\`Yb`/i`a`ni`gY\`Ybž`k`Y`W\`Y`5i`gk`]f`_i`b[Yb
X]Yg`Ui`Z]\`fY`@YVYbgY]bghY``i`b[\UVYb`_`ØbbhY"

9g`[UV`Y]bYb`C`fh`]b`XYf`B`À\`Y`XYf`; fYbnY`ni`5b[c`U`_]W\`k`Uf`a`]h
Y]bYa`D]`chYb`]b`Y]bYa`k`]bn][Yb`:`i`[nYi`[`Y]b[YZc[Yb`:`i`bX`U`g
k`]f`U`bXYhYbž`k`Uf`U`Y`gž`k`Ug`]W\`_]`ca`YhYfk`Y]h`gY\`Yb`_`cbbhYž
X]YgYf`\`Ø[Y`][Yž`d]Z]fg]W\`ZUfVYbY`GUbX``i`bX`_Y]bY`A`YbgW\`Yb``≠W
XUW\`hYž`]W\`\`U`i`n]b]YfY"

< UVYb`G]Y`bcW`Y]b`HfUi a n]Y`ž`XUg`G]Y`bcW`b]W`h
[YgY\Yb`\UVYb3

⇒W`k`ØfXY`[YfbY`Ui`Z`X]Y` : ÅfØYf! ⇒gY`b`cXYf`bUW` :]bb`UbX`cXYf`]b
XYb`_UbUX]gW`Yb`M`_c`b`cXYf`X]Y`B`c`f`X`k`Y`gh`!`HY`ff`]`hc`f`]Y`b`f`Y`]g`Y`b`" ⇒W`
ZØ`Y`a`]W`Y`i`hni`hU`[Y`n]Ya` `]W`j`ca` `B`c`f`XY`b`Ub`[Ync`[Yb`°

`U`h1` DUdU`[Y]Yb`hUi` W`Yf`Y`b`hgd`Ubb`Yb`g]W`Y`Ui`Z`A`m`_]b`Y`gž` : ÅfØYf!
⇒gY`b` 2`5`h`Ug`/` `6`c`c`hg`8`]Y` : ÅfØYf! ⇒gY`b`ghY`Yb`[Ub`n`c`V`Y`b`Ui`Z`
F`Y`X`X`mg`H`c`!`G`Y`Y`!`@]ghY`

F`Y`]g`Y`ZØ`f`Y`f`c`X`Y`f`b`]W`h`F`Y`]g`Y`ZØ`f`Y`f`3

C`Z`ž`]W`Z`]b`XY`F`Y`]g`Y`ZØ`f`Y`f`hc`" ⇒W`k`ØfXY`]`b`Y`b`Y`]b`ZUW`b`]W`h
Vi`W`ghUVYb`[YhfYi`Zc`[Yb`° ⇒W`Ya`dZY`Y`6`f`UX`h`!`b`X`X`U`g`b`]W`h
bi`fž`k`Y`]`g]Y`a`Y`]b`Y`f`gh`Y`g`6i`W`K`]`X`H]a`Y`g`j`Y`f`Ø`ZZ`Y`b`h`]W`h`\UVYb`"
8]Y` ; fØ`b`XY`f`]bž`<`]`U`f`m`6`f`UX`hž`]gh`Y`]b`Y`g`Y`f`]b`h`Y`f`Y`gg`Ub`h`Y` : fUi`"

G]b`X`G]Y`D`Ub`Y`f`c`X`Y`f`G`W`U`i` `i`gh][Y`f`3

9]b`V]ggW`Yb`j`cb`V`Y]X`Y`a` " <Yi`hni`hU`[Y`k`Y`»`]W`Y`[YfbY`ž`k`c`]W`
k`c`l`b`Y`ž`UVYf`]W`Y`UVY`_Y]b`Y`5i`gk`U`\`a`Ø`[`]W`_Y]h`Y`b`ZØ`f`8]b`[Yž`X]Y`
]W`g`Y`Y`b`_`Ubb`" ⇒W`V]b`a`Y`f`X`U`f`Ub`]b`h`Y`f`Y`gg]Y`f`hž`a`]W`a`]h`Y`]b`Y`a`
C`fh`Ui`Z`Y]b`Y`f`h]Y`Z`Y`f`Y`b`i`b`X`a`U`[]g`W`Y`f`Y`b`9`V`Y`b`Y`ni`j`Y`f`V]b`XY`b`"

⇒W`g`Y`hn`Y`a`]f`Y`]b`Y`5`V`g]W`h`i`b`X`g`Y`b`X`Y`X`Y`b` ; Y`X`U`b`_`Y`b`Ui`gž`V`Y`j`c`f`
]W`c`g`ZU`f`Y`ž`X`U`gg]W`X`c`f`h`V]b`ž`i`a`X`Y`b` ; Y]gh`X`Y`g`C`fh`Y`g`ni`Y`f`Y`b`ž`
Ub`X`Y`a`]W`a`]W`V`Y`Z]b`XY`" 9`g`Z`b`_h]c`b]Y`f`h`ZØ`f`a`]W`Y`Y`g`[]V`h`
]a`a`Y`f`A`ca`Y`b`h`Y`di`f`Y`f`J`Y`f`n`Ui`V`Y`fi`b`[ž`k`Y`bb`]W`X`U`a`]h`f`Y`]g`Y`
8`Y`b`_k`Y`]g`Y`"

< c`h`Y`c`X`Y`f`<`c`g`h`Y`f`c`X`Y`f`7`U`a`d]b`[Ł3

⇒W`V`Y`j`c`f`ni`[Y`5]f`V`b`V`i`b`X`i`b`UV`\`Å`b`[]Y`²`_c`!`@`X`[Y`gž`7`c`h`h`U`[Y`g`
c`X`Y`f`F`Y`h`f`Y`U`hg`" ⇒W`\UVY`a`Y`]b`Y`b`HY`]`V`Y]a`7`U`a`d`Y`b`[Y`a`U`W`hž`
UVYf`\Yi`hni`hU`[Y`]gh`Y`g`b]W`h`i`a`Y`f`f`Y`nj`c`ž`5i`gf`Ø`gh`i`b`[
\Yfi`a`ni`g`W`Y`d`d`Y`b`" ⇒W`\UVY`]b`X`Y`b`gd`U`f`h`Ub]g`W`gh`Y`b`<`c`g`h`Y`g`]b`
⇒X]Y`b`Ø`V`Y`f`b`U`W`h`Y`h`9]b`a`U`k`U`f`X`Y`f`Y]bn][Y`C`fhž`X`Y`b`]W`Z]b`XY`b`

_cbbhYž'Y]b'6Yh]b'Y]bYa 'A ÅbbYf\Y]a ']b'8Y'\]"?Y]bY'9fZU\fi b[ž
X]Y'jW\k]YXYf\c'Yb'a ÒW\hY"

⇒W\UVY'Ui W\]b'i b['Ui V]W\['Ua ci fÒgYbž'gc[Uf'dU'UghUfh][Yb
l bhYf_ØbZnYb'ØVYfbUW\hYh'i bX'Yg'k]f_]W\[' YbcggYb'°5VYf'jW\
VfUi W\Y'Yg'b]W\h"⇒W\U'hY'a]W\[' YfbY'Ub'CfhYb'Ui Ž'Ub'XYbYb
l a k YhgW\i h'i bX'; Ya Y]bgW\UZh'HY]'XYg'9h\cg'g]bX"

K Ug'k Uf'⇒f'k]W\h][ghYg'F Y]gYYf`YVb]g3

8 Ug']gh'gY\ f'gW\k]Yf]["'BU\Yni 'i ba Ò['jW"'BUa]V]U'_ca a h'a]f
]b'XYb'G]bb"'⇒W\']YVhY'X]YgY'k Y]hYbž'nYf_ØZhYhYb'@UbXgW\UZhYbž
X]Y'YfX][Yb': UfVYb"'9g']gh'Y]bZUW\gi ffYU'gW\Òb'i bX'j YfhfY]Vh
U'Y'; YXUb_Yb'Ui g'XYa '?cdZ'

K]f'a ØggYb'ZfU[Yb.'G]Y'g]bX']b'; i UfX]Ub'HfUj Y`
bUW_h'Ui Z[YhfYhYb"'K]Y3

⇒W\k Uf'U'Y]bY'Ui Z'BUhi fgi W\Y']b'XYb'DmfYbÅYb"'⇒W\ZUghYhY'i bX
_Ua d]YfhY'ZØbZHU[Y'Ub['k]'X'Ui ZY]bYa '6Yf[[]dZY"'9g'k Uf
VfØhYbX'\Y]» ž<cW\gca a Yf"'9g'k Uf'b]Ya UbX'XU'i bX'jW\XUW\hYž
k Ufi a '_Øa a YfY'jW\ 'a]W\ØVYf\Ui dh'i a '?Y]Xi b[3'5`gc'a UW\hY
]W\Y]b': chc'j cb'a]f'a]h'Y]bYa 'GY'VghUi g'ÒgYf'Ui Z'a Y]bYf
'?Ua YfU" fW\UhhY'a Y]b'HY'YZcb'b]W\h'XUVY]"⇒W\UhhY'Yg'XYa
: Ø\fyf'ØVYf'UggYbž'XYf'a]W\]\Yf\Yf'[YZØ\fh'\UhhY"Ł

⇒W\UVY'Y]b'GhØW_ZØf'X]Y'A Yhfc'[Ya UW\h'i bX'XUg'k Uf'XUg': chcž
XUg'g]Y[Ya UW\h'\UVYb": ØbZ'Ź\fy'gdÅhYf'i bX'\]Yf'g]bX'k]f'ja
@cW_Xck bž'i bX'H\Y'; i UfX]Ub'gi W\hY'bUW'5fh]_Y'b'ni a 'H\Ya U
=gc`Uh]cbgfY]gYbž'i bX'gc'gW\i []W\ 'a Y]bY'DmfYbÅYb!; YgW\jW\hY
j cf"⇒W\UhhY'Vi W\ghÅV]W\XUg'Y]bY': chc.'XUg'bUW_hY°

\hhdg.##k k k "]bghU[fUa "Wca #d#6!c%l +V<)?c#

GW\`Y]»]W\ž'k Ufi a 'fY]gYb3

9g']gh]b'a Y]bYf'8B5"'A Y]b'J UhYf'k Uf'Y]b'VY[Y]ghYfhYf'F Y]gYbXYf"
9f'i bX'a Y]bY'A i hhYf'\UVYb']b'Y]b][Yb'@ÅbXYfb'[Y'YVhž'U`gc'a i gg

]W\`XUg; Yb`[YYfVh\`UVYb"9g\`Uh'g]W\`ZØf'a]W\`]a a Yf`k]Y`Y]bY
nk Y]hY`B Uhi f`Ub[YZØ\`h"<Yi hni hU[Y`V]b`]W\`gY\`f`XUfUb
]bhYfYgg]Yfhž`bÅ\`Yf`Ub`a Y]bYf`<Y]a Uh`ni `Zc fgW\`Ybž`b]W\`h`bi f
k Y[Yb`a Y]bYg`7C &! : i » UVXfi W_gž`gcbXYfb`k Y]`Yg`a]W\`Y`hnh
Ubn]Y\`h"

`U`h1 2

F cVYfh`A UWZUf`UbY`VYgW\`fY]Vh`>]b]`F YXXmg`K UbXYf`UbX`U`g` Y]bY
k]hn][Yž`gUbZhYž`cf][]bY`Y`i bX`gY\`f`a cXYfbY`Gi W\`Y`bUW\`XYa
A U[]gW\`Yb`fb]W\`h`XYa `A mh\]gW\`YbŁ`]b`XYf`Vf]h]gW\`Yb`@UbXgW\`UZhž
X]Y`a]W\`gck c\`ni a `@UW\`Yb`VfUW\`hY`U`g`Ui W\`VYk Y[hY " "
K UbXYf`UbX`]gh`Y`hnh`U`g`<UfXWŁj Yf`Yf\`Å`h]W\`"

<Ui dhV]`X.`F Ud]hdi bh#G\i hhYfghcW_

8YhU]`g

6Ygi W\`Yb`G]Y`i bg`Ui Z.`Y]bY!fY]gY"XY