

## ? Ymk cfX. '\(\delta\) [ Yb\(\text{Ua}\) h H]hY`. \(\delta\) [ Yb\(\text{Ua}\) h '\(\frac{1}{2}\) W\(\text{V}\) Uf \(\text{Ua}\) \$+\"\(\frac{1}{2}\) \(\delta\) \(\frac{1}{2}\) \(\frac{1}{2}\)

5a '\$+"'A Àfn'&\$&('k]fX'XUg'¾ [YbXUa h'Ui Z[fi bX'XYg

♣bhYfbUh]cbU'Yb': fUi YbhU[g']b'XYf'NY]h'j cb'\$-.\$\$'V]g'%'.\$\$
I\f'YffY]W\VUf'gY]b"'8]Yg'hY]'hY'X]Y'6Yn]f\_gghUXhfÀh]b'ZØf

¾ [YbX'i bX'; Ygi bX\Y]hž: fUi '7Ufc`]bU'6Ò\a ža]h"'8Yf

?f]gYbX]Ybgh?]bXYfgW\i hn'XYg'¾ [YbXUa hYg'k]fX'Ub'X]YgYa

HU['gc[Uf'V]g'%.\$\$'I\f'YffY]W\VUf'gY]b"'@c\_U'Y

5i gk]f\_i b[Yb'\_ObbhYb'ZØf'9'hYfb'i bX

9fn]Y\i b[gVYfYW\h][hY']b'XYf'FY[]cb'fY'Yj Ubh'gY]bž'XU'g]Y

g]W\'Ub'X]YgYa 'HU['ZØf'6YfUhi b['cXYf'I bhYfghØhni b['Ub

XUg'¾ [YbXUa h'kYbXYb'\_ObbYb"'8Yf'j Yf'Àb[YfhY'GYfj]W\'XYg'?f]gYbX]YbghYg'?]bXYfgW\i hn'[YkÀ\f'Y]ghYh'ni XYa 'Y]bY

\_cbh]bi]Yf']W\Y'I bhYfghØhni b['VY]'U\_i hYb

?]bXYfgW\i hnZ\'Yb"'8Yf'-bhYfbUh]cbU'Y': fUi YbhU['\Uh'Y]bY

`Ub[Y'; YgW\]W\hY'i bX']ghY]b'k Y'hk Y]hYf' Ua d\Y'`]d/

5a `\$+"`A Àfn`&\$&(`k]fX`XUg`¾[YbXUa h`Ui Z[fi bX`XYg

\DhYfbUh]cbU`Yb`: fUi YbhU[g`]b`XYf`NY]h`j cb`\$-.\$\$`V]g`%'.\$\$`I\f
YffY]WXVUf`gY]b"`8]Yg`hY]`hY`X]Y`6Yn]f\_gghUXhfÀh]b`ZØf`¾[YbX`i bX
; Ygi bX\Y]hž: fUi `7Ufc`]bU`6Ò\a ž`a]h"`8Yf`?f]gYbX]Ybgh
?]bXYfgWXi hn`XYg`¾[YbXUa hYg`k]fX`Ub`X]YgYa `HU[`gc[Uf`V]g
%,.\$\$`I\f`YffY]WXVUf`qY]b"

@c\_U`Y`5i gk]f\_i b[Yb`\_ÒbbhYb`ZØf`9`hYfb`i bX

9fn]Y\i b[gVYfYW\h][hY`]b`XYf`FY[]cb`fY`Yj Ubh`gY]bž`XU`g]Y`g]W\`Ub
X]YgYa `HU[`ZØf`6YfUhi b[`cXYf`I bhYfghØhni b[`Ub`XUg`¾[YbXUa h
k YbXYb`\_ÒbbYb"'8Yf`j Yf`Àb[YfhY`GYfj]W\`XYg`?f]gYbX]YbghYg
?]bXYfgW\i hn`[Yk À\f`Y]ghYh`ni XYa `Y]bY`\_cbh]bi]Yf`]W\Y
I bhYfghØhni b[`VY]`U\_i hYb`?]bXYfgW\i hnZ\`Yb"

8 Yf → hYfbUh]cbU`Y :: fUi YbhU[ '\Uh'Y]bY '`Ub[ Y'; YgW\]W\hY i bX']gh
Y]b'k Y`hk Y]hYf'HU[ 'ni f': ÒfXYfi b[ 'XYf'; `Y]W\VYfYW\h][i b[ 'XYf
; YgW\`YW\hYf" → 'j ]Y`Yb'@ÀbXYfb']gh'X]YgYf'HU[ 'Y]b'[ YgYhn`]W\Yf
: Y]YfhU[ ž'XYf'XUni 'X]Ybhž'Ui Z': fUi YbfYW\hY'i bX'X]Y'Fc``Y'XYf': fUi
]b'XYf'; YgY``gW\UZh'Ui Za Yf\_gUa 'ni 'a UW\Yb"

±b'XYf'Zc`[YbXYb'HUVY``Y'g]bX'Y]b][Y'±bZcfa Uh]cbYb'ni

2 ZZbi b[gnY]hYb'XYg'≯[YbXUa hYg'i bX'XYg'?f]gYbX]YbghYg
?]bXYfgWki hn'Ua '±bhYfbUh]cbU`Yb': fUi YbhU['Ui Z[YZØ\fh

p:8]YbghghY``Y`p'^2 ZZbi b[gnY]hYb'p

p !p

p'\$|[YbXUa h'p'\$+"\$' "&\$&(ž'\$-.\$\$' '%' .\$\$'I \f'p

p'?f]gYbX]Ybgh'?]bXYfgWXi hn'p'\$+"\$' "&\$&(ž'\$-.\$\$' '% .\$\$'I \f'p

9g'k ]fX'Ya dZc\`Ybž'X]YgY' $\pm$ bZcfa Uh]cbYb'ni 'VYfØW\_g]W\h][ Yb'i bX VY]'6YXUfZ'X]Y'YbhgdfYW\YbXYb'8]YbghY']b'5bgdfi W\'ni 'bY\a Yb"

ElY`Y.'k k k "VYf`]b"XY

8 Y hU]`q

6Ygi WXYb G]Y i bg Ui Z. a Y]b!VYf`]b bYh