

@]W\hYbVYf[Yf'?i`hifgcaaYf.'9]b : Ygh]j U`'j c``Yf', VYffUgW\ib[Yb°

9f`YVYb`G]Y`XYb`Vi bhYb`5VgW\`i gg`XYg`@]W\hYbVYf[Yf?i`hi fgca a Yfg`&\$&(`a]h`nU\`fY]W\Yb`JYfUbghU`hi b[Yb`V]g
9bXY`GYdhYa VYf°`Jcb`@j Y!8 xg`k]Y`FcVU[`K fi\aYžØVYf
CdYb!5]f!?]bcg`i bX`X]Y`@Ub[Y`BUW\h`XYf`6]`XYf`V]g`\]b`ni a
GYYbZYgh`Ua`CfUb_YgYY``Yg`]gh`ZØf`YXYb`; YgW\aUW_
Yhk Ug`XUVY]"'9bhXYW_Yb`G]Y`?i bghž`A i g]__i bX`?i`hi f`]b
@]W\hYbVYf[`i bX`[Yb]Y»Yb`G]Y`Y]b`UVk YW\g`i b[gfY]W\Yg
Dfc[fUa až`XUg`XUg`@YVYb`]a`6Yn]f_`ZY]Yfh"'⇒bZcfa]YfYb`G]Y
g]W\`Yhnh`ØVYf`U``Y`<][\`][\hg°



9]b'_i `hi fY``Yg': Yi Yfk Yf_']b'@]W\ hYbVYf[.8Yf'5VgW\]YX'XYg'?i `hi fgca a Yfg'&\$&(

8]Y``YhnhYb`K cWXYb`XYg`@]WXhYbVYf[Yf`?i`hi fgca a Yfg`&\$&(Yfa Ò[`]WXYb`XYb`6Yk c\bYfb`i bX`6Ygi WXYfb`XYg`6Yn]f_g`Y]bY: Ø``Y`j cb`_i`hi fY``Yb`9f`YVb]ggYb"`A]h`XYf`?Ua dU[bY@]WXhYbVYf["'AY\f`?i`hi fgca a Yf`U`q`Xi`XYb_gh° k]fX`X]Y

 $\label{eq:continuous} $J = Y^*gY = \frac{1}{2} h^*XYf^*? i bgh`UbXgWXUZh^*]b^*XYf^*FY[]cb^*[YZY]Yfh'i bX^*UbX]Y^*VfY]hY^2 ZZYbh`]WX_Y]h'j Yfa]hhY`h''$

J]Y`ZU`h'XYf'JYfUbghU`hi b[Yb

5a '\$*"'i bX'\$+"'GYdhYa VYf'Z]bXYh'Y]bY'FY]\Y'j cb
J YfUbghU`hi b[Yb'ghUhhž'X]Y'?i bghž'?]bc'i bX'a i g]_U`]gWXY
8 UfV]Yhi b[Yb'i a ZUggh"'6YgcbXYfg'\Yfj cfni \YVYb']gh'X]Y' @Ub[Y
B UWXh'XYf'6]`XYf 'Ua '\$*"\$-"ž'VY]'XYf'j cb'%, 'V]g'&('I \f']b
@]WXhYbVYf['?Øbgh`Yf]bbYb'i bX'?Øbgh`Yf'Ub'Yhk U'(\$'CfhYb']\fY
K Yf_Y'dfÀgYbh]YfYb"'8]Y'6Ygi WXYf'_ÒbbYb'Ybhk YXYf'Ub
[YZØ\fhYb'Hci fYb'hY]`bY\a Yb'cXYf'X]Y'?]YnY'Ui Z'Y][YbY': Ui gh
Yf_i bXYb"

?]bcibX?ibghZØfU``Y

Ni gÀhn`]W\`ni `XYb`_Øbgh`Yf]gW\Yb`9f`YVb]ggYb`k]fX`Y]b`CdYb`5]f! Gca a Yf_]bc']a $\rightarrow hYf_i$ `hi fY``Yb'; UfhYb'@]W\hYbVYf[[YVchYb" 8Yf':]`a $\sim \$$ (\$' 'K]f`fYhhYb'X]Y`K Y`h' 'k]fX`Ua 'gY`VYb`HU['i a \\\$'I \f'[YnY][hi bX']gh'_cghYb`cg'ZØf`U``Y`ni [Àb[`]W\"8]YgY JYfUbghU`hi b[Yb'ZÒfXYfb'b]W\h'bi f`XYb'_i `hi fY``Yb'5i ghUi gW\ž gcbXYfb'ghÀf_Yb`Ui W\`XUg'; Ya Y]bgW\UZhg[YZØ\`']b'@]W\hYbVYf["

9]b: YghZØf?]bXYfibX: Ua]`]Yb

8 UgʻGYYbZYghʻUaʻCfUb_YgYYʻUaʻ\$+"\$-"'V]YhYhʻ5_h]j]hÀhYbʻZØfʻX]Y [UbnYʻ: Ua]`]Y"'A]hʻHfUdYn_Øbgh`Yfbʻi bXʻ[fc»Yb KY`hfUi acVY_hYbʻkYfXYbʻ?]bXYf\YfnYbʻ\Ò\YfʻgW\`U[YbžkÀ\fYbX'Ui W\ʻ9fkUW\gYbYbʻY]bʻUbgdfYW\YbXYgʻDfc[fUaa[YVchYbʻk]fX"'8Yfʻ9]bhf]hhʻ]ghʻZØfʻ?]bXYfʻV]gʻni '%&ʻ\$J\fYbʻZfY]žʻkUg XYbʻ6Ygi W\`Ui W\ʻZØfʻ: Ua]`]YbʻYfgW\k]b[`]W\`aUW\h"

$A i g]_! 9j Ybhg i b X H YUhYfUi ZZØ fi b [Yb$

8 Y f'? i `hi fgca a Y f'V]Y hY h'Y V Y bgc 'Y]b Y b '6`] W 'Ui Z'X]Y '`c_U`Y H\YUhY f`Ub X g W\UZh" '5 a '\$, "\$-"'Y b hZ Ø\fh'X]Y '\$ [Yb X h\YUhY f[fi dd Y G\U_Y g d Y U f Y 'Zc f' H Y Y bg 'a]h']\fY a 'Gh Ø W '8 Y f'Ghi fa 'X]Y

Ni gWX Ui Yf']b'X]Y'ZUgn]b]YfYbXY'K Y`h'XYg'H\YUhYfg"'8 UfØVYf\]bUi g'VY[Y]ghYfh'XUg'H\YUhYf'GhfU\`a]h'XYa 'GhØW_' K]f'\c`Ybi bg'X]Y'BUWXh'ni fØW_ ž'XUg'Ub'8fc[Ybgi WXh'i bX'@cmU`]hÀh']b:fYi bXgWXUZhYb'h\Ya Uh]g]Yfh"'8]YgY'DfcXi_h]cbYb'nY][Yb'X]YK]WXh][_Y]h'j cb'_i `hi fY``Yb'9f`YVb]ggYb'ZØf'X]Y'; YgY``gWXUZh'i bXXYfYb'JYfUbhk cfhi b['[Y[YbØVYf'qcn]U`Yb'H\Ya Yb"

K Yfhj c``Y'6Y[Y[bib[Yb'ibX'=bhY[fUh]cb

9]b'k Y]hYfYf'<Ò\Ydi b_h']gh'X]Y'@Ygi b['XYf'5i hcf]bbYb'A Y`]gU'/
A Ub]_'Ua '%+"\$-"']a '?i `hi f\Ui g'? Uf`g\cfghž'X]Y'; YgW\]W\hYb'ØVYf
A][fUh]cb'i bX'_i `hi fY``Y'J]Y`ZU`h'YfnÀ\`h"'8]YgY'5fh'j cb
J YfUbghU`hi b[Yb'ZÒfXYfb'XYb'8]U`c['i bX'X]Y'+bhY[fUh]cb'j cb
A YbgW\Yb'Ui g'i bhYfgW\]YX`]W\Yb'<]bhYf[fØbXYbž'k Ug']b'XYf
\Yi h][Yb'; YgY``gW\UZh'j cb'YggYbn]Y``Yf'6YXYi hi b[']gh"

Ni gUa a YbZUggi b['i bX '5i gV`]W_

8 Yf @ W. hYb VYf [Yf? i `hi fgca a Yf & \$&(`Yb XYh `a]h `Y]b Ya `Vi bhYb A]l `Ui g `J Yf UbghU`hi b [Yb ž X]Y `gck c \``X]Y ``c _U`Y `? i `hi f \Yfj cf\YVYb `U`g `Ui W. `X]Y ; Ya Y]b g W. UZh `ghÀf _Yb "`J cb `?]b c `Ø VYf? i bgh `V]g `ni `J Yf UbghU`hi b [Yb `ZØf :: Ua]`]Yb ` `X]Y `J]Y `nU\``XYf 5b [YVchY `nY][hž k]Y @ W. hYb VYf [`_i `hi fY``Y `J]Y `ZU`h `YVh `i b X g W. Àhnh" `8]Y *\bar{b}]h]Uh]j Y `g W. UZZh `b] W. h'bi f `F Ài a Y `ZØf `_i `hi fY``Yb 5i ghUi g W. ž g cb XYfb `Ui W. `ZØf `d Yfg Òb`] W. Y `6Y [Y [bi b [Yb `i b X [YqY``q W. UZh`] W. Y `\beta hY [f Uh]cb"

6 Ygi WX Yb 'G]Y 'i bg 'Ui Z. 'a Y]b!VYf`]b "bYh