

A Uf_hUbU`mgY. DfY]ghfYbX VY] FY[fUbi `UhYb bUWX I f`Ui VgnY]h

8 Yf A Uf_h ZØf GhUb X Uf X! F Y [f Ubi `UhY 'n Y] [h]a 5 i [igh Y]b Y Fi \ Yd \ UgYž Df Y]gUbd Uggi b [Yb 'gh Y\ Yb 'X Ybbc W\]a F Uiaž [XYU` ZØf GYdh Ya V Y f"

 $= A Uf_h Z Of GhUb X Uf X! F Y[f Ubi `UhY ']gh'ni fn Y]h Y]b Y 'gd Of V Uf Y Fi \ Y 'Y]b[Y_Y \ fh'' '8 Yf '5i [i gh Z]Y `ni f'; \ Abn Y ']b 'X]Y 'gca a Yf`] W Y I f`Ui V gn Y]h Z'k Ug 'X Uni 'Z O\ fh Y Z' X U gg 'X]Y 'B U W Z f U[Y 'b U W F Y[f Ubi `Uh Y b 'gh U f_ '[Y X A a d Z h 'k Uf'' J]Y `Y 'J Y f U f V Y]h Y f `\ U V Y b ']b X]Y g Y f `N Y]h j Y f gi W h Z' D f Y] g b U W `Agg Y 'j cb 'X Y b 'F Y[f Ubi `]Y f Y f b 'ni Z c f X Y f b Z' Y X c W 'gh]Y \(Y b 'X) Y g Y '6 Y a Ø \ i b [Y b 'k Y]h [Y \ Y b X 'Ui Z 5 V `Y \ bi b ["'8]Y F Y[f Ubi `]Y f Y f 'g U \ Y b 'g] W 'Ui Z[fi b X 'X Y f 'A U f_h`U[Y b]W h ']b 'X Y f 'D c g]h]c b Z' b U W ni [Y V Y b 'i b X _c b b h Y b 'gca]h 'X]Y 'D f Y]g Y gh U V]`` \ U `h Y b''$

 $8 Y f'A Uf_h'nY][h'g]WX']b'Y]bYa 'gc[YbUbbhYb'Fc``cjYfž'k Ug VYXYi hYhž'XUgg'X]Y'DfY]gY']b'XYf'FY[Y``Ui Z'XYa '[`Y]WXYb'B]jYUi k]Y'ni j cf'V`Y]VYb'''@YX][`]WX'VY]'Y]b][Yb'k Yb][Yb'A UhYf]U`]Yb'k Uf Yg'XYb'FY[fUbi `]YfYfb'a <math>O[`]WXZ'X]Y'DfY]gY'ZØf'\cWk Yfh][YfY Ei U`]hÀhYb'`Y]WXh'Ubni \YVYb'''8]Yg'\Uh'XYf'6fUbWXYbX]Ybgh?i bghghc\ZZ'\DZcfa Uh]cb'f\?\DZ'Ub\G'\Can Vi f[']b'gY]bYa 'U_hi Y``Yb Cb`]bY!FYdcfh'Xc_i a Ybh]Yfh''$

6YgcbXYfY BUW ZfU[Y VY] F 9 D9H

5i gbU\a Yb`VYghÀh][Yb`VY_Ubbh`]W\`X]Y`FY[Y`.`K À\fYbX`X]Y
U``[Ya Y]bY`BUW\ZfU[Y`ØVYf`XUg`[YgUa hY`GdY_hfi a `XYf`GhUbXUfX!
FY[fUbi `UhY`ni fØW_[]b[ž`gU\`X]Y`G]hi Uh]cb`VY]`F9`D9H`_`Uf`UbXYfg
Ui g"`F9`D9H`k]fX`]b`XYf`; YhfÀb_Y]bXi ghf]Y`VYgcbXYfg`ghUf_
bUW\[YZfU[hži bX`gc`YffY]W\hYb`X]Y`5VbY\a Yf`]a `5i [i gh`X]Y`ZØf

X]YgY'NY]h'ØV`]W\Y'BUW\ZfU[Y"'8]Y'; Yhfàb_YgU]gcb'VYY]bZi ggh X]YgYb'HfYbX'Yf\YV`]W\Z'XcW\'k]fX'Ui W\'\]Yf'Y]bY'8Àa dZ b['XYf BUW\ZfU[Y'a]h'XYa'VYj cfghY\YbXYb'9bXY'XYf'GU]gcb']a _ca a YbXYb'A cbUh'Yfk UfhYh"

8]Y'dcg]h]j Y'9bhk]W_\i b['VY]'F 9'D9H'nY][hz'XUgg'gdYn]Z]gW\Y A Uf_hgY[a YbhY'i bhYfgW\]YX\]W\Y'8 mbUa]_Yb'Ui Zk Y]gYb'_\ObbYb" 8]Y'<c\(ZZ\)bi b['XYf'FY[fUbi \]YfYfz'XUgg']a 'GYdhYa VYf'Y]bY U\\[Ya Y]bY'6Y\YVi b['XYf'BUW\ZfU[Y'Y]bgYhnhz'gW\Y]bh'YXcW\\fYU\]gh]gW\"BUW\XYf'I f\Ui VgnY]h'k]fX'Yfk UfhYhz'XUgg'j]Y\Y JYfUfVY]hYf'k]YXYf'U_h]j Yf'k YfXYb'i bX'X]Y'5VbU\a Y'XYf'K UfY Ubn]Y\Yb'_\ObbhY"

A Uf_hYbhk]W_ib[ibX.DfY]gghfUhY[]Y

CV'X]Y'FY[fUbi`]YfYf']\fY'JYf_Ui ZgdfY]gY']a '_ca a YbXYb'A cbUh Ub\YVYb'_ObbYbž'V`Y]Vh'UVni k UfhYb"'8]Y'A Uf_hYbhk]W_`i b[
_ObbhY'YXcW\'Xi fW\'X]Y'k]YXYfUi Z'YVYbXY'BUW\ZfU[Y']a
GYdhYa VYf'VY[Øbgh][h'k YfXYb"'9g'\UbXY`h'g]W\'XUVY]'i a 'Y]bY\Y]_`Y'6U`UbW\'Ni '\c\Y'DfY]gZcfXYfi b[Yb'_ObbhYb'X]Y
JYfUfVY]hYf'XUni 'Vf]b[Ybž'bUW\'5`hYfbUh]j Yb'ni 'gi W\Ybž'k À\fYbXni 'b]YXf][Y'DfY]gY'X]Y'K]fhgW\UZh`]W_Y]h'XYf'FY[fUbi`]YfYf
[YZÀ\fXYb"

9]b 6`]W_]b X]Y Ni _i b Zh X Y g A Uf_h Y g

: Øf`X]Y`FY[fUbi`]YfYf`]gh`Yg`YbhgWXY]XYbXž`ZYI]VY``Ui Z`X]Y
A Uf_hYbhk]W_`i b[Yb`ni `fYU[]YfYb"`9]b`5bgh]Y[`XYf`BUWXZfU[Y
_`ObbhY`bYi Y`A O`[`]WX_Y]hYb`ni f`DfY]g[YghU`hi b[`YfOZZbYbž`k cVY]
Yg`k]WXh][`]ghž`b]WXh'j ca `K YhhVYk YfV`ØVYf\c`h`ni `k YfXYb"`9]bY
[YgWX]W_hY`5Vgh]a a i b[`XYf`JYf_Ui ZgghfUhY[]Yb`_ObbhY`XYf
GWX`ØggY``ni a `9fZc`[`gY]bž`]bgVYgcbXYfY`]b`Y]bYa `A Uf_hž`XYf`g]WX
]a `ghÀbX][Yb`K UbXY``VYZ]bXYh"

8]Y'G]hi Uh]cb']a '?i bghghcZZa Uf_h']gh'Y]b'±bX]_Uhcf'ZØf'VfY]hYfYk]fhgW\UZh`]W\Y'HfYbXg'i bX'nY][hžk]Y'gU]gcbU'Y': U_hcfYb'X]YBUW\ZfU[Y'i bX'DfY]g[YghU'hi b['VYY]bZi ggYb'_ObbYb"'K]Y'g]W\X]Y'8]b[Y'Ybhk]W_Y`b'kYfXYbž'V`Y]Vh'UVni kUfhYb"'8]Y'NY]h'bUW\XYa 'Gca aYf'_ObbhY'gckc\`'Y]bY'<YfUi gZcfXYfi b['U`g'Ui W\Y]bY\7\UbW'ZØf'U``Y'6YhY]`][hYb']a 'FY[fUbi `UhgY_hcf'XUfghY``Yb"

 $8]Y`]b`XYf`?i bghghc ZZ]bXi ghf]Y`\ Ai Z][Yb`GWk Ub_i b[Yb`]a`A Uf_h ZØf`GhUbXUfX!FY[fUbi`UhY`g]bX`cZhj cb`gU]gcbU`Yb`9]bZ`ØggYb [YdfA[h" 8]YgY`gWk Ub_YbXY`BUWkZfU[Y`]gh`b]Wk h`bi f`Y]bY < YfUi gZcfXYfi b[`ZØf`X]Y`FY[fUbi`]YfYfž`gcbXYfb`\Uh`Ui Wk`h]YZYfY k]fhgWkUZh`]WkY`K i fnY`b"'\DgVYgcbXYfY`X]Y`nm_`]gWkYb JYfAbXYfi b[Yb`]b`XYf'; YhfAb_Y]bXi ghf]Yž`X]Y`hfUX]h]cbY``Ui ZGU]gcbU`]hAh`Ub[Yk]YgYb`]ghž`gd]Y`Yb`\]YfY]bY`k YgYbh`]WkY Fc``Y"'\DbYb`Sbgh]Y[XYf'Fc\ghcZZdfY]gY`Yfk UfhYbž'k Ybb`g]Wk`X]Y BUWkZfU[Y`bUWk`FY[fUbi`UhYb`k]YXYf`VY`YVh"$

8]Y'DfY]g[YghU'hi b['VY]'FY[fUbi `UhYb']gh'ghUf_'j cb'XYb'DfY]gYb
XYf'Fc\ghcZZY'VYY]bZi ggh''@Ui h'?i bghghcZZ'=bZcfa Uh]cb'V`Y]Vh
XYf'DfY]g'ZØf'BYi k UfY'Y]b'YbhgWXY]XYbXYf': U_hcf'''GhY][YbXY
Fc\ghcZZdfY]gY'_ObbhYb'X]Y'FY[fUbi `]YfYf'XUni 'Vf]b[Ybž'X]Y
DfY]gY'ZØf']\fY'DfcXi _hY'ni 'Yf\O\Ybž'k Ug'Ui Z'`Ub[Y'G]WXh'gck c\`
ZØf'<YfghY``Yf'U`g'Ui WX'ZØf'JYfVfUi WXYf'?cbgYei YbnYb'\UVYb
Ubb'''8]YgY'8 mbUa]'_ObbhY'Ui WX'X]Y'=bbcj Uh]cbg_fUZh']b'XYf
FYWmW]b[]bXi ghf]Y'VYY]bZi ggYbž'XU'I bhYfbY\a Yb'j YfVYggYfh
HYWXbc`c[]Yb'Ybhk]W_Y`b'a ØggYbž'i a 'k YhhVYk YfVgZÀ\]['ni
V'Y]VYb''

9]b [YbUi YfYf 6]W_Ui ZX]Y U_hi Y`Y BUW ZfU[Y nY][hž XUgg g]W Y]b][Y A UhYf]U`]Yb ghUV]`\U`hYbž k À\fYbX UbXYfY Yf\YV`]W Y DfY]ggW k Ub_i b[Yb Yf YVYb _ObbhYb "6YgcbXYfg]a :: c_i g ghY\Yb fY WhW]b[ZÀ\][Y A UhYf]U`]Yb k]Y F 9 D9Hž X]Y Ui Z[fi bX]\fYf \c\Yb J Yfk YbXVUf_Y]h]b XYf; Yhf Ab_Y]b Xi ghf]Y Y]bY _cbghUbhY BUW ZfU[Y Ui Zk Y]gYb "F Y[fUbi `]YfYf]b X]YgYa 'GY_hcf _ObbhYb j cb XYa 'U\fYgnY]h`]W Yb F ØW_[Ub[k À\fYbX XYf I f`Ui VggU]gcb ``Ub[Zf]gh]['dfcZ]h]YfYbž k Ybb XYf 6YXUfZ k]YXYf UbghY][h" 8 Ug VYXYi hYhž XUgg XUg ghfUhY[]gW Y A UbU[Ya Ybh j cb @U[YfVYghAbXYb]b XYb 'Gca a Yfa cbUhYb Yb hgW Y]XYbX]ghž i a X]Y A Uf_hVYX]b[i b[Yb cdh]a U`ni 'bi hnYb"

A $Uf_hUbU^mgY'ibX'?UiZjYf\U^hYb$

⅓ \\f	JYfVfUi WXYf]bhYfYgg	K UWAghi a ']a
	Y'Ub'fYWmWY`hYb	FYWmW]b[a Uf_h'fl Ł
	DfcXi_hYb^fl Ł	
&\$&\$	*	%\$
&\$&%	+&	%&
&\$&&	+)	%(

8]YgY 'HfYbXg'i bhYfghfY]WXYb'X]Y'k UWXgYbXY'6YXYi hi b['XYgFYWmW]b[g']b'XYf'A UhYf]U'k]fhgWXUZh'i bX'X]Y'Bchk YbX][_Y]h'ZØfFY[fUbi`]YfYfž'g]WX'Ub'X]Y'g]WX'AbXYfbXYb'JYfVfUi WXYfk ØbgWXYUbni dUggYb"'I bhYfbY\a Ybž'X]Y']bbcj Uh]j Y'5bgAhnY'ni fJYfVYggYfi b['XYf'FYWmW]b[dfcnYggY'j YfZc`[Ybž'_ÒbbhYb`Ub[Zf]gh]['Y]bYb'K YhhVYk YfVgj cfhY]`'Yf`Ub[Yb"

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