



LING5015

8]gWt̄i fgY '5 bU`mg]g

HYfa 'H\ fYY`##`&\$&\$

7ci fgY`Cj Yfj]Yk

GHJZ7cbHJW`8YHU`g

7cbj Ybcfg

B Ua Y	9a Uj`	5j Uj`UVj]m	@cWJhcb	D\cbY
5b]_i` < Uhcgg	U"Uhcgg4 i bgk "YXi "Ui	VmUddc]bħa Ybh	A cfj Yb`6fck b	Ž*%&-' ,) , ' (\$

GWcc``7cbHJW`bZcfa Uhjcb

GWcc``cZ<i a Ub]hYg`UbX`@Jb[i U[Yg

@cWJhcb. GWcc``C ZWŽA cfj Yb`6fck b`6i]X]b[ž@Yj Y`&ž&),

CdYb]b[`<ci fg.`A cbXUm! : f]XUmž - Ua `!) da

D\cbY. Ž*%&-' ,) `%*, %

: U! . Ž*%&-' ,) ; +\$)

9a Uj: [\U`4 i bgk "YXi "Ui](#)

7 ci fgY'8YHJ]g

7 fYX]hDc]bqg '*

Gi a a UfmcZ\Y'7 ci fgY

H\]g'Wci fgY'XYj Y'cdg'mci f'fYgYUfW'g_]`g'UbX'mci f'Uk UfYbYgg'cZ'Ub[i U[Y' i gY']b'gcWYfm'5''_Ym UddfcUWX'g'hc' hYI hUbu'mg]g'k]''VY'fYj]Yk YX'hc' []j Y'mci 'U'VfcUX'dYfgdYWVj Yzk \]W' mci 'Wb'Udd'mhc'U fUb[Y'cZ]gWd']bUfmW'cbhYI hg']bW' X]b['Udd']YX'']b[i]gh]VgZ'fUbg'Uhc'b'UbX']bH'fdYfUhc'bZ'a YX]U'UbX W'ca a i b]W]h'cb'gh' X]Yg'UbX'bUffU]j Y'UbU'mg]g''Mci 'k]''XYj Y'cd'mci f'W]h]W']b_]b['UVci h\ck' 'Ub[i U[Y' i gY'fYZYW'g'UbX'g\UdYg'ci f'k cfX'UbX'X]gW'gg'gcW]U' d\Ybca YbU'fY"["YeI U']mZ'gcW]U' ^ gh]W'Z fYdfYgYbH]cb'cZUgmi a' gYY_YfgZ'YH'W'hc'fci [\ 'hYI hUbu'mg]g''Mci 'k]''U'gc'YUfb'UVci h\ck'gdYU_Yfg a U_Y'W'c]W'g'hc' dYfZ'ca' h'Y]f']XYbh]mZ'W'c'dYfU'Y'UbX'YI dYfg'gd'c']H'YbYgg']b'W'cbj YfgUhc'bg'UbX'bUffU'Y dUghYj Ybqg''# h'Yfa g'cZk f]h'Y'b' h'YI hgZ'mci 'k]''gh' XmW'c'\Yg]cb'UbX'W'c'\YfYbW']b'UWXYa]Wk f]h]b[Z'UbX h']g'k]''\Y'd'mci 'VY'U'VY'h'Y'f'k f]h'Y'f'': cf'mci f'dfc'YW'gZ'mci 'k]''VY'Z'fY'hc' W'ccgY'Z'ca'U'VfcUX'fUb[Y'cZ h'YI h'mdYg']bW' X]b['bYk gdUdYfgZ'fUbg'Uhc'b#bH'fdYf]b['h'YI hgZ'UWXYa]W'h'YI hgZ'bU'hi fU'W'cbj YfgUhc'bg'UbX gcW]U'a YX]U'h'YI hg''

7 ci fgY '@YUfb]b['Ci hW'ca Yg

% " X]Ybh]ZmUbX''UVY'Z'YU'hi fYg'cZbU'hi fU'W'cbj YfgUhc'bg']b'9b[']g\ 'i g]b['W'cbj YfgUhc'bg'UbU'mg]g h'W'cb]ei Yg"
&" F YW'cfX'UbX'h'UbgW]VY'U'g\cfh'W'cbj YfgUhc'bg']g]b['h'UbgW]d]h'cb'W'cbj Ybh]cbg"
' " 8Yg][b'U'fYgYUfW' d'fc'YW'hi g]b['X]gW'ci fgY'UbU'mg]g'a Y'h'cXg"
(" 9j U'i U'h' h'Y'W'c'bbYW]h'cbg'VY'h' Y'Yb'Ub[i U[Y' i gY'UbX'gcW]U'Z'dc']h]W'UbX'W' h' fU'Z'ca Uhc'bg"
) " 8Yj Y'cd'Ub'UbU'm]W']gh'U'Y' [mhc'YI d'cfY'dU'h'Y'fbg'cZgdc_Yb'cf'k f]h'Y'b'X]gW'ci fgY"
*" 5f[i Y'Z'f'h'Y'j'U'X]m'icZU'X]gW'ci fgY'UbU'm]W'UddfcUWX'UbX']i gh'U'Y' h'Y' i gY'cZ\Y'UddfcUWX h'fci [\ 'YI Ua d'Yg''

HYUWX]b['Gh'fU'Y' []Yg'

@YUfb]b['UbX'HYUWX]b['F Uhc'bu'Y

H\Y'W'cbh'Y'bhk Ug'W]fY'Z' 'mgY'YW'X'hc'W'cbj Yf'U''a U'cf'h'Y'bXg']b'X]gW'ci fgY'UbU'mg]g'<ck Yj YfZ'h']g'a YUbg h'U'hi h'Y'j Uf]ci g'UddfcUWX'g'UfY'bchYI d'cfYX']b'XYd'h' " H\Y'U]a']g'hc' []j Y'Ub']b'f'c'Xi W]h'cb'hc'YUWX UddfcUWX'gc'h'U'ghi XYbqg'W'cb'g'Y'W'h' h'Y'VYghUddfcUWX'Z'f'h'Y']f'fYgYUfW' d' fdcgYg''

HYUWX]b['Gh'fU'Y' []Yg'

7'UggYg'k]''fi b'Z'f'&' \ci fg'Z]W'V'h'!Z]W']b'U'k cf_g\cd'Z'ca U'h' h'Y' h'YUWX]b['gh'fU'Y' [m]g'hc'W'ca V]bY' h'Y h'Y'cfY'h]W' [fci bX]b['k]h' d'fU'W]W'Udd']W]h'cbg''A cgh'cZ\Y'h'ja Y'k]''VY'U'cW]h'X'hc' [fci d'X]gW'gg]cbg VUgYX'cb'h'Y'dfY'gY'h'X]gW'gg]cb'ei Ygh]cbg'UbX'YI YfW]gYg'Ug'ci h]bYX']b'h'Y'W'ci fgY'gW'X'Y'Xi 'Y''@YW'hi fY h'ja Y'k]''VY']ja]h'X'Z'f'W]U'f]Z]W]h'cb'cZ'V'cbW'dhg''Gh' XYbqg'UfY'fYei]fYX'hc' d'fYdU'fY' h'Y']f'U'bgk Yfg'hc' h'Y YI YfW]gYg'UbX'U'W]j Y'm'fU_Y'dU'f]b'W]Ugg'X]gW'gg]cb'': cf'h'Y'dfc'YW'hiUgg][ba Ybh'gh' XYbqg'k]''W]ffm'ci h h'Y']f']b'X]j]xi U'gh' XmcZ]gW'ci fgY'UbU'mg]g'cb'gdc_Yb'cf'k f]h'Y'b'Z'ca g'cZ]gW'ci fgY''

5ggYgga Ybh

5ggYgga YbhHUg_g`

5ggYgga YbhHUg_	K Y][\h	8i Y'8UH	Gh XYbh@YUfb]b[Ci hWta Yg'5ggYggYX
7cbj YfgUH]cb'5bU'mg]g`	' \$i	%* #/\$#&\$&\$' \$) . \$\$' DA	%ž&
Dfc YWñDfYgYbHU]cb`	&\$i	' \$/#/\$#&\$&\$' \$) . \$\$' DA	(ž*
Dfc YWñ) \$i	&\$#/#/#&\$&\$' \$) . \$\$' DA	' ž)

5ggYgga Ybh8YHU]`g

5ggYgga Ybh%`7cbj YfgUH]cb'5bU'mg]g`

GHUfhXUH. `Bch5dd`WUV`Y

8YHU]`g.

Gh XYbh]Wta d`YH`U`Wcbj YfgUH]cb`UbU'mg]g`HUg_`cZU`g\cfhbUhi fU`gdYYW`gUa d`Y`"H\Y`HUg_`]g`Ufci bX
%\$\$\$`k`cfXg`"

Gh XYbh]fYVW]j`Y`k`f]hYb`ZYXVUW`"

Hi fb]h]b`gYH]b[.`H\]g`Ugg][`ba`Ybh]g`gi`Va`]hYX`h`fci`[`\`Hi`fb]h]b`UbX`gh`XYbh]Xc`bchgYY`Hi`fb]h]b`
g]a`]Uf]mifYdcf]g`"

5ggYgga Ybh&`Dfc YWñDfYgYbHU]cb`

GHUfhXUH. `

8YHU]`g.

H\]g`]g`Ub`]bX]j`]Xi`U`HUg_`"Gh XYbh]g`[`]j`Y`U`g\cfhif)`a`]bi`hYgE`dfYgYbHU]cb`f%\$i`E`cb`h\Y]f`]bX]j`]Xi`U`
X]gWci`fgY`UbU'mg]g`a`]b]!dfc YWñd`Ub`UbX`gi`Va`]hiU`)`\$!k`cfX`dfYgYbHU]cb`UVghfUWñf%\$i`E`"Gh XYbh]UFY`"

H\]g:]g:U'dfc'YVhUgg][ba YbhcZ' \$\$\$'k cfXg'YI Wi X]b['fYZfYbW'g" Gh XYbtg'W\ccgY'Ub'UFYU'cZ]bHfYgh]b
X]gVti fgY'gh X]Yg'UbX'XYj Y'cd'U'a]b]!dfc'YVh' H\Y'dfc'YVh]bWi XYg'XUH'UbU'mg]g'i g]b['fY'Yj Ubh
X]gVti fgY'h\YcfmUbX'a YhcXg'Vtj YfYX']b'h\Y'Vti fgY"

Gh XYbtg'fYVW]j Y'k f]Hb'ZYXVUW_"

5 HfYbXUbW F Yei JfYa Ybhg

D YUgY bchY hUh YWfi fY fYwcfX]b[g UfY bchUj U]UV Y Zcf h]g Wci fgY " Gh XYbhg UfY ghfcb[mYbWci fU[YX hc UHfYbX U WUggYg UbX WcbhUWhY 7 ci fgY 5i hcf]mhc a U_Y UHfYbUhj Y UffUb[Ya Ybhg Zcf WUggYg a JggYX"

7 ci fgY GWXYXi Y

[J Jk WUgg ha YHUVY](#)

Hja YHUVY

8UH	HmdY	7cbhYbh
K YY_%%(GYdhYa VYf! % GYdhYa VYf	Hcd]W	<p>hfcXi W]cb. Cj Yfj JYk cZ8]gWci fgY 5bU]mg]</p> <p>% K Uf]b[7 \UdhYf% &" 7 UbX]bž 7 "B "ž 7 f]W]hcbž >"ž/ 'A ccFYžG" <" f&\$\$+L" 9I d'cf]b['8]gWci fgY]b 7 cbhYi hUbX]b 5W]cb "DU[fUj Y A UWa] Ub I ?" 7 < 5DH9F % 5g_]b[W]hW ei Ygh]cbg. < ck]g X]gWci fgY XYZ]bYX UbX cW]hX3</p> <p>CB@B9: CFI A . gh XYbhg X]gW gg _YmWcbWd]g UbX XYZ]b]h]cbg</p>
K YY_&.&%(GYdhYa VYf! &) GYdhYa VYf	Hcd]W	<p>8]gWci fgY ghfi Wfi fY =fhYi hghfi Wfi fYž[YbfY UbX dUfh]W]dUbrgk</p> <p>% K Uf]b[7 \UdhYfg &! ' -ghfi Wfi fY cZ]hY hg &" 7 UbX]bž 7 "B "ž 7 f]W]hcbž >"ž/ 'A ccFYžG" <" f&\$\$+L" 9I d'cf]b['8]gWci fgY]b 7 cbhYi hUbX]b 5W]cb "DU[fUj Y A UWa] Ub I ?" 7 < 5DH9F " . K \c]g]bj c] YX]b X]gWci fgY3 GYW]cb " "+; YbfYg</p> <p>CB@B9: CFI A . gh XYbhg UbU]mgY ZYUhi fYg cZUb UW]XYa]W]hYi h</p>
K YY_' .&.(GYdhYa VYf! & C WcVYf	Hcd]W	<p>8]gWci fgY ghfi Wfi fY =f]ghfi Wfi fY cZ Wcbj YfgU]h]cbgk</p> <p>% K Uf]b[7 \UdhYfg &! ' -ghfi Wfi fY cZ]hY _ &" 7 UbX]bž 7 "B "ž 7 f]W]hcbž >"ž/ 'A ccFYžG" <" f&\$\$+L" 9I d'cf]b['8]gWci fgY]b 7 cbhYi hUbX]b 5W]cb "DU[fUj Y A UWa] Ub I ?" 7 < 5DH9F *. K \mhUhbck 3</p> <p>5`gc fYWca a YbXYX. Dca YfUbm UbX: Y \f&\$\$+L" 7 cbj YfgU]h]cb 5bU]mg]g" 7 \UdhYf- '8]gWci fgY Gh X]Yg. 5 A i]hX]gW]d]bUfmi hfcXi W]cbž YX]hYX Vm</p>

8]^_žHYi b'5"j UbžG5; 9 'Di V]W]h]cbgž&\$%%"fU
ghYd'VmighYd [i]XYŁ

CB@B9: CFI A.'Dcgh]hg\cfhZ]a .'
[\hdg.##rci li "VY#JJ \[Y>\) Ye`GA](#)

		<p>\YfY3ž/eWUf[a` e a` XSUWS` V XSUW adj S` V `7 < 5DH9F " " -eWUf[a` e a` Ua__g` [f[Ve aXbdSuf[UWS` V _ W_ TWbz[b USfWadfeSf[a` ž</p> <p>5`gc`fYWca a YbXYX.</p> <p>K Yglž@UbX`HfYghYf`f&\$% Ł: UWk cf_`cb: UWVcc_ @Ub[i U[Y`cZbYk`a YX]U" 7\UdhYf`,]b`HUbbYbž8" UbX`HfYghYfž5"A "fYX"Ł8]gWci fgY`&"\$"; Ycf[Ytck b l b]j Yfg]mDfYgg"</p> <p>CB@B9: CFI A .`ghi XYbtg`X]gW gg`ZUWk cf_`cb : UWVcc_"</p>
<p>K YY_*.`%`C WcVYf!`& C WcVYf</p>	<p>Hcd]W</p>	<p>8]gWci fgY`UbX`XYbh]mi=</p> <p>%` K Uf]b[`7\UdhYf`+ &" 8Y':]bUž5"f&\$%Ł8]gWci fgY`UbX`]XYbh]m` 7\UdhYf`%`]b`8]gWci fgY`Gh`X]Yg. 5 A i`hX]gWd`]bUfm`bhfci W]cbžYX]hYX`Vm8]`ž HYi b`5"j UbžG5; 9`Di V]W]h]cbgž7\UdhYf`+</p> <p>5`gc`fYWca a YbXYX.</p> <p>G]a cb; ccXa Ub/`Gi`gUb`5"GdYYf`f&\$%+Ł 7Uf[cfmi`gY`]b`hY`7cbgfi W]cb`cZ5gmi a GYY_Yfgž7f]h]W]`8]gWci fgY`Gh`X]Ygž(.&ž%`)!%`) ž 8C`=%\$"%\$, \$#%+(\$) - \$\$+\$%(* (, ' &</p> <p><Uhcggž5"f&\$%Ł"K \YfY`UfY`mci`Zfca`3`XYbh]m Wcbgfi W]cb`UbX`Yi`dYf]YbWg`cZ`c`hYf]b[`]b`hY bUffU]j Yg`cZGi`XUbYgY`fYž [YY!VUW[fci`bX 5i`ghU`]Ubg""8]gWci fgY`Gc`WY]m&`fŁ`(+!*, "</p> <p>CB@B9: CFI A .`ghi XYbhi`d`cUX`U`g`cfhbYk`g]hYa`UbX`Yi`d`cfY`a Ya`VYfg`]d`WU]h[cf]gU]h]cb.`\ck Xc`bYk`gdUdYfg`fYžf`h`Y] Ybtg`UbX`dYcd`Y3`K` \Uh Xc`hYgY`Wc]W]g`hY`i`g`UVci`h]XYc`c[miUbX fYdfYgYbU]h]cb3</p>
<p>K YY_+.`&`C WcVYf!` \$ C WcVYf</p>	<p>Hcd]W</p>	<p>8]gWci fgY`UbX`]XYc`c[mi=f7 85`hYcfnŁ</p> <p>%` K Uf]b[`7\UdhYf`, &" 7UbX`]bž7""B`ž7f]W]h]cbž>"ž/`A`ccfYžG""<" f&\$%+Ł"9i`d`cf]b[`8]gWci fgY`]b`7cbhYi`hUbX]b`5W]cb""DU[fUj`Y`A`UW`]`Ub`I`?" 7<5DH9F` ; ,`<ck`Xc`X]gWci fgY`UbX`gc`WU` W]Ub[Y`Xf]j`Y`YUW`c`hYf3</p> <p>5`gc`fYWca a YbXYX.</p> <p>: U]fWci [\žB""UbX`K`cXU`žF""f&\$%Ł`7f]h]W]</p>

		<p>8]gWŁi fgY`5bU`mg]g"7\UdhYf%+`]b`8]gWŁi fgY Gh X]Yg.`5`A i`hX]gW]d`]bUfm`bfcXi W]cbžYX]hYX`Vm 8]^žHYi b`5"j UbžG5; 9`Di V`]W]h]cbgž&\$\$%"</p> <p>J Ub`8]^žH"i`f&\$\$%&8]gWŁi fgY`UbX`]XYc`c[m` 7\UdhYf%`]b`8]gWŁi fgY`Gh X]Yg.`5`A i`hX]gW]d`]bUfm` bfcXi W]cbžYX]hYX`Vm8]^žHYi b`5"j UbžG5; 9`Di V`]W]h]cbgž&\$\$%"</p> <p>E fgVW fe bdMŁW f bca WUf [VWSe</p> <p>C B@B9: C F I A .`Gh XYb]g`X]gW gg`W ffYbhdC`]h]W] X]gWŁi fgY`#Yk g`g]hcfmUbX`YI d`c`fY`]XYc`c[m]b`hYI h`</p>
<p>K YY_` .`&`Bcj Ya VYf!`*` Bcj Ya VYf</p>	<p>Hcd]W</p>	<p>8]gWŁi fgY`UbX`]XYc`c[m`=fa i`h]a cXU`]mŁ</p> <p>%` K Uf]b[`7\UdhYf`-</p> <p>5`gc`fYWŁa a YbXYX.</p> <p>F ca U[bi c`cž5"i`f&\$\$-Ł`Dc`]h]W]`X]gWŁi fgY`]b hfUbg`U]h]cb.`5`WŁfdi g!VUgYX`gh XmiHfUbg`U]h]cb`UbX` bHyfdYf]b[`Gh X]Yg (.`%f&\$\$-Łž`%` \$"Xc] %\$"%\$+) #]g(""%`\$fca</p> <p>8]a]h]g`GYfU]gžGUfU`; fYWŁž7\]UfU`Dc``Ufc`] / 7\]UfU`>Yfa]b]!A Ufh]bYn`Gcf]U`f&\$\$-Ł`Hck UfXg`Ub]b]h[fU]hX`Uf[i a Ybh]h] Y`UddfcUW`h`a i`h]a cXU` W]h]W]`X]gWŁi fgY`UbU`mg]g. Yj]XYbW`Zca`hY dcffUmU`cZfYŽ [YYg`UbX`]a a][fU]h]g`]b; fYU` bYk gdUdYfgž7f]h]W]`8]gWŁi fgY`Gh X]Ygž8C = %\$"%\$, \$#%+(\$) - \$("&\$%- "%+\$%) \$-</p> <p>C B@B9: C F I A .`gh XYb]g`dcghU`a i`h]a cXU`hYI h a U[Un]bY`WŁj Yf`cf`UXj Yfh]gYa YbhUbX`]X]gW gg`hY gcW]U`gYa]ch]WUgdYW]g`cZk`Uha YUb]b[]g WŁbj YmYX`k]h`k`U]h]cc`g</p>
<p>K YY_`-`-`Bcj Ya VYf!` %` Bcj Ya VYf</p>	<p>F YUX]b[</p>	<p>B c`WUgg`gWYXi`YX"</p>
<p>K YY_`%\$.`%*`Bcj Ya VYf!` &\$`Bcj Ya VYf</p>	<p>F YUX]b[</p>	<p>B c`WUgg`gWYXi`YX"</p>

F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

- K Uf]b[ž< Ubgi b`N\Ub[`f&\$% Ł8]gWci fgY`UbU`mg]g. H\Y`ei Ygh]cbg`X]gWci fgY`UbU`mg]g Ug_`UbX \ck`h\YmUbgk Yf`h\Ya "F ci hYX[Y"Y6cc_`I BGK `@]VfUfm
- 7 UbX`]bž7 "B"ž7 f]W\rcbž>"ž/ `A ccFYžG""<"f&\$%+Ł"9I d`cf]b[`8]gWci fgY`]b`7 cbhYI hUbX`]b`5W]cb" DU`[fUj Y`A Uvå]`Ub`I ?""Y6cc_`I BGK `@]VfUfm

F YWca a YbXYX`F Ygci fWg

F YWca a YbXYX`Y6cc_g`]b`I BGK `@]VfUfm

- J Ub`8]`^žH""5" fYX`Łf&\$%Ł8]gWci fgY`Gh`X]Yg. 5`A i`h]X]gWd`]bUfm`b]fcXi W]cbžG5; 9 Di V`]W]h]cbgž&\$%`"DfcE i Ygh9Vcc_`7 YbfU`ž \h]dg.##YVcc_`W]bfU"dfcei Ygh`Wca #]V# bgk #YfU]"UW]cb3XcW81*, - () %
- DU`f]X[Yž6f]Ub`f&\$%Ł8]gWci fgY`UbU`mg]g. 5b`]b]fcXi W]cb""&bX`YX""6`cca gVi fm`Y6cc_`]b I BGK `@]VfUfm
- < mUbXž? "žYhU""f&\$%Ł"6`cca gVi fm7ca dUb]cb`h`8]gWci fgY`5bU`mg]g"@cbXcbžI ? ž 6`cca gVi fmDi V`]g\]b[`D`W`
- 6]VYfž8"ž/ `7 cbfUXžG" f&\$%- Ł" F Y[]ghYfž[YbfYžUbX`ghmY" F Yf]Yj YX`žca \h]dg.##YVcc_`W]bfU"dfcei Ygh`Wca

WU`Yb[]b["

Gh XYbhZYXVUW_k]`VY`[U\YfYX'h\fc [\`cbY!a]bi h`dUdYfg`k YY_`m`

Gi Va]gg]cb`cZ5ggYgga YbhiHUg_g

Hi fb]h]b`Gi Va]gg]cb

Ʒmci`YbWci bHYf`U`dfcV`Ya`k` \Yb`UH`Ya` dh]b[`hc`gi`Va`]hmc`i`f`Ugg][`ba`Ybhi`h`fci`[`\`Hi`fb]h]b`z`d`Y`UgY`
HY`Yd`cbY`9I`HYfbU`Gi`ddcfhcb`-`,`)`"``'``%cf`Ya`U]`h`Ya`icb`YI`HYfbU`HY`hgi`ddcfh4`i`bgk`"YXi`"Ui`""Gi`ddcfh`
`lci`fg`UfY`,`.\$\$Ua`-`-%\$.\$\$da`icb`k`YY`XUmg`UbX`-`.\$\$Ua`-`).\$\$da`icb`k`YY`YbXg`f1`*)`XUmg`U`mY`Uf2`Ʒmci`
UfY`i`bUV`Y`hc`gi`Va`]hmc`i`f`Ugg][`ba`Ybhi`Xi`Y`hc`U`Zi`h`k`]h`Hi`fb]h]b`mci`a`UmUdd`m`Zc`f`Ub`YI`HYbg]cb`z`Vi`hmc`i`
a`i`ghf`Y`h]b`mci`f`h]W`Y`hbi`a`VYf`Z`ca`9I`HYfbU`Gi`ddcfh`f`U`cb[`k`]h`Ubmc`h`Y`f`f`Y`Y`Ubh`Xc`W`a`Yb`hg`k`hc`
]b`Wi`XY`Ug`Y`j`]X`Y`b`V`W`hc`gi`ddcfh`mci`f`YI`HYbg]cb`Udd`]W`h]cb`"Ʒmci`Ya`U]`9I`HYfbU`Gi`ddcfh`mci`k`]`
Ui`hc`a`U`h]W`U`m`f`Y`W`]j`Y`U`h]W`Y`hbi`a`VYf`z`Vi`h]Z`mci`HY`Yd`cb`Y`mci`k`]`b`Y`Y`X`hc`gd`Y`W`Z`W`U`m`Ug`_`Zc`f`cb`Y`"
Hi`fb]h]b`U`gc`d`fc`j`]X`Y`gi`d`X`U`h`g`icb`h`Y`]f`gm`gh`Ya`g`h`U`h`g`icb`Hk`]h`Y`f`"

;`Yb`Y`f`U`m`z`Ugg`Y`gga`Yb`hi`U`g`_`g`a`i`gh`V`Y`gi`Va`]h`Y`X`Y`Y`W`f`cb]W`U`m`j`]U`Y`]h`Y`f`Hi`fb]h]b`cf`U`A`cc`X`Y`
Ugg][`ba`Yb`h`i`h`]b`g`h`U`b`V`W`g`k` \Y`f`Y`h`l`g`]g`b`ch`d`c`g`g]V`Y`z`]h`k`]`V`Y`g`h`U`h`X`icb`mci`f`W`ci`fg`Y`g`A`cc`X`Y`g`]h`k`]h`
U`h`Y`fb`U`h]`Y`gi`Va`]gg]cb`X`Y`h]g`"

:`cf`]b`Z`c`fa`U`h]cb`cb`l`ck`hc`gi`Va`]h`Ugg][`ba`Yb`hg`icb`]b`Y`j`]U`A`cc`X`Y`.\`h`d`g`#`gh`XYb`h`i`bgk`"YXi`"Ui`#`ck`!
gi`Va`]h`Ugg][`ba`Yb`h`a`cc`X`Y`"

5 WUXYa]W< cbYgmiUbX`D`U[]Uf]ga

D`U[]Uf]ga `]g`i]g]b[`hY`k cfXg`cf]XYUg`cZcH`Yfg`UbX`dFYgYb]b[`hYa `Ug`mci f`ck b`" #WUb`hU`Y`a` Ubm
Zcfa gZ`Zca `XY`]VYfUH`VX`YU]b[`hc`UW]XYb]U`m`Wc]dm]b[`Zca `U`gci fW`k]h`ci hUW`bck `YX[Ya`Yb]f`

I BGK ` [fci dg`d`U[]Uf]ga `]bhc`hY`Zc`ck]b[`W]hY[cf]Yg.

7 cdm]b[.`i]g]b[`hY`gUa`Y`cf]j`Yfmg]a]Uf`k cfXg`hc`hY`cf][]bU`hY`hcf]XYU`k]h`ci hUW`bck `YX[]b[`hY`
gci fW`cf`i]g]b[`ei`c]h]cb`a`Uf`g`"H`g`U`gc`Udd`]Yg`hc`]a`U[YgZ`Uf]h]UbX`XYg][b`dfc`YW]gZ`Ug`k`Y`Ug`
dfYgYb]h]cbg`k`YfY`gca`YcbY`dFYgYb]g`Ubch`Yf`g]XYUg`cf`k`cfXg`k]h`ci hW]YX]f`

#Uddfc]df]U]h`d`UfUd`fUg]b[.`7`U]b[]b[`U`Zk`k`cfXg`UbX`d`fUgYg`k`Y`a`cghm]fY]h]b]b[`hY`cf][]bU`
gh]f] W]fY`UbX`#cf`dfc[fYgg]cb`cZ]XYUg`cZ`hY`cf][]bU`Z`UbX`]bZcfa`U]cb`k]h`ci hUW`bck `YX[Ya`Yb]f`H`g`U`gc`
Udd`]Yg`]b`dfYgYb]h]cbg`k`YfY`gca`YcbY`d`UfUd`fUgYg`Ubch`Yf`g]XYUg`cf`k`cfXg`k]h`ci hW]YX]h]UbX`hc`
d]YW]b[`hc[Y`h`Yf`ei`c]h]g`UbX`d`UfUd`fUgYg`]bhc`U`bYk`k`c`Y`Z`k]h`ci hUddfc]df]U]h`fY`ZY`fY`bW]b["

7 c`i]g]cb.`k`cf_]b[`k]h`c]h`Yfg`Vi`hdUgg]b[`cZ`h`Y`k`cf_]Ug`U`dYfgcb`g`]bX]j]Xi`U`k`cf_]7`c`i]g]cb`U`gc`
]bW] XYg`dfc]j]X]b[`mci`f`k`cf_]hc`Ubch`Yf`g]h`XYbh]VY`Zc`fY`h`Y`Xi`Y`XU]h`Zc`f`Zc`f`h`Y`di`fdcgY`cZ`h`Ya`
d`U[]Uf]g]b[`Uh]Ubmi]ja`Y`Z`dUm]b[`Ubch`Yf`dYfgcb`hc`dYfZcfa`Ub`UW]XYa`]W]h]g`_`Z`gh]U`]b[`cf`UW]i`]f]b[
Ubch`Yf`dYfgcb`g`UW]XYa`]Wk`cf_]UbX`Wc]dm]b[]h`Z`Z]f]b[`hc`W]a`d`Y`h`Ubch`Yf`dYfgcb`g`k`cf_]cf`gY]_]b[

- i bXYfgHUbX'mci f'f][\hg'UbX'fYgdcbg]V]]hYg'Ug'U'gh XYbhUhl BGK
- VY'Uk UfY'cZd'U[]Uf]ga ž'Wcdmf][\hž' BGK 'Gh XYbh7cXY'cZ7cbXi WñUbX'5WwdfUV'Y'I gY'cZ
I BGK '⇒H'F Ygci fW'g'Dc`]Wñ

5 WUXYa]W=Zcfa Uh]cb

: cf`YggYbh]U`ghi XYbh]bZcfa Uh]cb`fY`Uh]b[`tc.

- fYei Yg]Zcf`YI H`bg]cb/
-