## F]g]b['GhUfg'G\]bY. A YYh'h\Y'&\$&) '5``! 7ci bhm'; ]f`g'HYbb]g'HYUa \*

9ld`cfY: fcghdfccZ/ \_ \$' - /g`ghUbXci h`hYbb]g`hU`Ybhg`Ug`h\Ymg\]bY`]b`h\Y`&\$&) `Wci bhm`hci fbUa Ybhž`ZYUhi f]b[`hcddYfZcfa Yfg`UbX`\cbcfg"



: fcghdfccZz: `cf]XUzI G5 !!H\Y'gi b'g\cbY'Vf][\h`mcj Yf'h\Y
6YYfa Ub: Ua]`m'HYbb]g'7YbhYf'Ug'YI W]hYa Ybh'Z]``YX'h\Y'U]f
Xi f]b['h\Y'Dc`\_'7ci bhm'6cmg'UbX; ]f`g'HYbb]g'Hci fbUa Ybh''
5a cb['h\Y'ghUbXci h'd`UmYfg'k Ug'5i Vi fbXU`Y g'A W?YbbU'6Uhh]``Už
U'bUa Y'h\Uh'YW\cYX']b'Ubh]W]dUh]cb'Zcf'h\Y'g]b[`Yg'Z]bU`g''
I bZcfhi bUhY`mž'6Uhh]``U g'gYUgcb'k Ug'W' h'g\cfh'Xi Y'hc'U'\_bYY
]b'1 fm'gi ghU]bYX'Xi f]b['h\Y'gcWWYf'd`UmcZZgž'dfYj Ybh]b['\Yf'Zfca
XYZYbX]b['\Yf'Wci bhm'W\Ua d]cb'h]h`Y'h\]g'mYUfž'Ug'bchYX'Vm'H\Y
@YX[Yf"'H\]g']b'1 fm'gYfj YX'Ug'U'V]hhYfgk YYh'VUW\_Xfcd'Zcf'Ub
Yj Ybh'g\ck WUg]b['fYa Uf\_UV`Y'hU`Ybh'UbX'Wca dYh]h]j Y'qd]f]h''

 $H\ g''MCibhm'h]h'Y'Vinn'WYbhYfYX'bch'cb`m'cb'6Uhh]``U'VihU`gc'cb'BmU'?Yff'Zfca'GUbhU':Y'7Uh\c`]Wz'k \c'g]a ]`Uf`m'ZUWYX$ 

]b 'i fm'k c Yg'hck Uf Xg'h\ Y '`UhhYf'\ U`Z'c Z'h\ Y 'gY Ugcb"'H\ Ym'k Yf Yb h U`cb Y ']b 'h\ Y]f 'ghfi [ [ `Y / 'a Ub m'd`Um Yfg'di g\ Y X'h\ fci [ \ 'h\ Y \ W\ U``Y b [ Ygž'a U\_]b [ 'h\ ]g 'gY Ugcb'a Ya cfUV`Y"'B chUV`mž' \*J X U' < i hhc Zfca 'A W? YY``Ub X' < Ub b U\ 'K ]b X\ Ua 'c Z': fcghdfcc Z'Vch\ g\ ck \ WUgY X'h\ Y]f'dfck \ Yggž' \ W]b \ W\ ]b [ 'X]ghf]\ Wh'h]h`Yg"'A \ W? YY` g'[ ]f`g hY Ua 'hcc\_']h'U'ghY d'Zi fh\ Yfž'k ]b b]b [ 'h\ Y'fY[ ]cb U``h]h`Y' Ub X'a U\_]b [ U'fi b']b 'h\ Y'ghUhY'hci fb Ua Ybhž'Ug' H\ Y'@Y X [ Yf'fY dcfhY X"

## G\]b]b[ GhUfg

A W? YbbU'6Uhh]``U g'dUh\ 'hc'VYWca ]b['h\Y'D`UmYfcZ'h\Y'MYUf'\Ug VYYb'bch\]b['g\cfh'cZ']bgd]f]b['":5ZhYf'Xca ]bUh]b['h\Y'Wci fh'Ug'U ZfYg\a Ubž'g\Y'Zci bX'\Yf'gcd\ca cfY'gYUgcb'XYfU]`YX'Vm']b' fm Vi h'fYhi fbYX'h\]g'mYUf'hc'fYWU]a '\Yf'ghUbX]b['":5`cb[g]XY 6Uhh]``Už'H\Y'@YX[Yf'\][\`][\hg'ch\Yf'YI WYdh]cbU``hU`Ybhg'`]\_Y <UbbU'K]bX\Ua ž'k\c'VcUghYX'Ub']a dfYgg]j Y'-!\$'fYWcfXž'UbX \$JXU'<i hhcž'k\c'k fUddYX'i d'\Yf'fY[i `Uf'gYUgcb'i bXYZYUhYX'Uh %(!\$"'H\Y]f'UW\]Yj Ya Ybhg'Wcbhf]Vi hYX'f]W\`m'hc'U'ghfcb['g\ck]b[cZ'hU`Ybh'UWfcgg'h\Y'Wci bhm'

 $\label{thm:wc} H\Y`UVWc`UXYg`X]Xb\ h`ghcd`h\YfY"`J\ U`Yf]Y`?YbXf]W\_\check{z}`U`Zcfa\ Yf\\ Wci\ b\ hm`W\&\ Ua\ d\ ]cb`hi\ fbYX`WcUW\&\check{z}`YUfbYX`h\Y`7cUW\&`cZ'h\Y`MYUf\\ Uk\ UfX`UZhYf``YUX]b[``A\ W?YY``hc`X]ghf]Wh`UbX`fY[]cbU``j]Whcf]Yg"`<YfXYX]WUh]cb`UbX`YI\ dYf]YbWY`i\ bXci\VhYX`m`d`UmYX`U`g][\ b]Z]WUbh`fc`Y]b`\Yf`d`UmYfg\ fYa\ Uf_UV`Y`gi\ WWYgg`h\]g`gYUgcb"$ 

## 7ca dYh]h]j Y Gd]f]h

5g'h\Y'hci fbUa Ybh'k fUddYX'i dž']h'a Uf\_YX'bch'' gh'h\Y'YbX'cZ'U Wca dYh]h]j Y'gYUgcb'Vi h'h\Y'VY[]bb]b['cZ'dfYdUfUh]cbg'Zcf'h\Y i dWca ]b['X]ghf]Wh'hci fbUa Ybhž'k \YfY'Uh\'YhYg'`]\_Y'GU'ha Ub'UfY YI dYWhYX'hc'g\]bY'cbWY'U[U]b"'K]h\'d`UmYfg'`]\_Y'6f]'Ym'8Uj]g'UbX 7]UfU'Ga ]h\'Zfca 'A W?YY`'W]bW\]b['k]bg']b'h\Y]f'a UhW\Ygž'h\Y

FYZYWh]b['cb'h\]g'gYUgcbž'h\YfY g'a i W\'hc'WY`YVfUhYž'XYgd]hY'h\Y ]b'\text{1} f]Yg'UbX'\i fX`Yg'a Ubm'ZUWYX"'H\Y'd`UmYfgž'WcUW\Ygž'UbX gi ddcfhYfg'\Uj Y'g\ck b'h\Uh'h\Y'gd]f]h'cZ'hYbb]g']b'Dc`\_'7ci bhm']g U`]j Y'UbX'h\f]j ]b['''<YfY g'\cd]b['bYI h'gYUgcb'Vf]b[ g'Wcbh]bi YX gi WWYgg'UbX'hf]i a d\g'cb'UbX'cZZ'h\Y'Wci fh'

8 YhU]`g	
Cfh	: fcghdfccZž: `cf]XUž'l G5
EiY``Yb	• k k k "h\ Y`YX[ Yf"Wca
	• gdcfhg"mU∖cc"Wca

6 Ygi W Yb 'G]Y 'i bg 'Ui Z 'a Y]b!k ]Yb "b Yh