



# ARTS2900

; `cVU` : Ya ]b]ga g. '7 ca dYh]b[ 'J ]g]cbgž'J Ufm]b[ ' < ]ghc f]Yg

GYa YghYf'Hk c`##`&\$%



GWYbWg: \hdg.## k k "Ufng"i bgk "YXi "Ui #W ffYbhghi XYbhg#UWXYa JW]bZcfa Uhcb#dfcfcWc`gl[i ]XY]bYg#

5 UWXYa JW]bZcfa Uhcb`

: cfYggYbhU`ghi XYbh]bZcfa Uhcb`fY`Uh]b[ `hc. `fYei Yghg`Zcf`YI hYbg]cb/fYj ]Yk `cZa Uf\_g/cVW dUhcbU` \YU`h  
UbX`gUZym/YI Ua ]bUhcb`dfcW`Xi fYg/gdYW]U`Wc]bg]XYfUhcb`]b`hY`Yj YbhcZ]`bYgg`cf`a ]gUXj Ybhi fY/  
ghi XYbhYei ]hmUbX`X]gUV]`]hm`UbX`ch`Yf`YggYbhU` UWXYa JW]bZcfa Uhcbz  
gYY: \hdg.## k k "Ufng"i bgk "YXi "Ui #W ffYbhghi XYbhg#UWXYa JW]bZcfa Uhcb#dfcfcWc`gl[i ]XY]bYg#

7 ci fgY'8YHJ]`g

7 fYX]hDc]bhtg`\*`

Gi a a UfmicZ`h`Y'7 ci fgY

Gi V`Y`W`h`5`f`Y`U` I` a`\_`W` i`e`S` V` 9`W` V`W`d`E` f`g`V`[`W`e`

H\]g`W`e`i` f`g`Y` W`U`b` U`'g`c` V`Y`'g`h` X`]Y`X`'j`b`h`Y`'Z`c`k` ]b[ `g`d`Y`W`U`]g`U`h`c`b`g`.' : [efack

H\]g`W`e`i` f`g`Y` W`e`b`g`]X`Y`f`g` V`c`h`'Z`Y`a` ]b`]g`h`U`H`Y`a` d`h`g`'h`c`'f`[` U`b`]g`Y`' [ `c`V`U`'m`i`U`W`f`c`g`g` f`U`W`U`'z`Y`h`b`]W`U`b`X`'b`U`h`c`b`U`  
V`c`i` b`X`U`f`]Y`g`z`U`b`X`'X`]Z`Y`f`Y`b`W`'g`'j`b`'Z`Y`a` ]b`]g`h`g`h`f`U`H`Y` [ ]Y`g`'U`b`X`'j` ]g`]c`b`g`'Z`c`f`'h`Y`'Z`'h`'f`Y`'M`c`i`'k` ]'`f`U`W`'h`Y`  
Y`a` Y`f`[` Y`b`W`'U`b`X`'W`e`b`h`]b`i` U`h`c`b`'c`Z`h`c`'W`e`a` d`Y`h`b`[ `f`U`X`]h`c`b`g`-`f`Y`Z`c`f`a`'U`b`X`'f`Y`j`c`i`h`c`b`-`Z`c`a`'U`b`U`f`W`X`]g`h`  
k`c`a`Y`b`'g`'U`W`]j` ]g`h`'h`f`c`i` [ \ `h`c`'W`e`b`h`Y`a` d`c`f`U`f`m`h`f`U`b`g`b`U`h`c`b`U`'U`b`X`'d`c`g`h`W`e`'c`b`]U`'Z`Y`a` ]b`]g`a`g`'M`c`i`'k` ]'`U`'g`c`  
Y`I`U`a` ]b`Y`'f`Y`W`'b`h`Z`Y`a` ]b`]g`h`U`W`]j` ]m`h`U`h`'U`g`' [ U`f`b`Y`f`Y`X`' [ `c`V`U`'U`H`Y`b`h`c`b`'U`b`X`'W`e`b`f`c`j` Y`f`g`n`z`g`i` W`X`'U`g`'g`'U`a` ]W`  
Z`Y`a` ]b`]g`a`'U`b`X`'D`i`g`g`m`F`]c`h`'H`f`c`i` [ \ `c`i`h`k`Y`'\`]\`]\`]\`h`c`b`[`c`]b`[ `W`]h`e`i` Y`g`'c`Z`h`Y`'i`b`]j` Y`f`g`U`]g`h`W`U`]a`g`'c`Z`g`c`a`Y`  
Z`c`f`a`g`'c`Z`Z`Y`a` ]b`]g`a`z`'j`b`W`i`X`]b`[ `b`X`][`Y`b`c`i`g`'U`b`X`'j`b`h`f`g`Y`W`]c`b`U`'W`]h`e`i`Y`g`"

5 h`h`Y` W`e`b`W`i` g`]c`b`'c`Z`h` ]g`W`e`i` f`g`Y`'h`Y`'g`h` X`Y`b`h`k` ]'`V`Y`'U`V`'Y`'h`c`

%` 8`Y`a` c`b`g`h`f`U`H`Y`'U`'V`f`c`U`X`z`W`f`c`g`g`!`W`'h`'f`U`'i` b`X`Y`f`g`h`U`b`X`]b`[ `c`Z`[ `c`V`U`'Z`Y`a` ]b`]g`a`g`  
&` =>X`Y`b`h`z`m`\_`Y`m`h`Y`a` Y`g`z`X`Y`V`U`H`Y`g`'U`b`X`'W`e`b`W`d`h`g`'j`b`'Z`Y`a` ]b`]g`h`'\` ]g`h`c`f`m`U`b`X`'g`W`X`c`'U`f`g`'\`d`"  
'`" `7`c`b`g`h`f`i` W`h`U`f`[`i`a`Y`b`h`g`'i`g`]b`[ `[`Y`b`X`Y`f`'U`b`X`#`c`f`'Z`Y`a` ]b`]g`h`U`b`U`'m`g`]g`'U`b`X`'f`Y`g`Y`U`f`W`X`' ]b`k`f`]h`Y`b`'U`b`X`#`c`f`'j`Y`f`V`U`  
Z`c`f`a`"  
(`" `5`f`h`]W`'U`H`Y`'U`b`i` b`X`Y`f`g`h`U`b`X`]b`[ `c`Z`'c`k`'W`U`g`g`z`f`U`W`'U`b`X`#`c`f`'g`Y`I`i`U`]m`]b`Z`c`f`a`'Z`Y`a` ]b`]g`a`#`g`'\` ]g`h`c`f`]W`U`'m`U`b`X`  
]b`'h`Y`'d`f`Y`g`Y`b`h`"

H`Y`U`W`X` ]b`[ `G`h`f`U`H`Y` [ ]Y`g`'

H\]g`W`e`i` f`g`Y`'k` ]'`Y`'d`'m`c`i`'X`Y`j`Y`'c`d`'U`'V`f`c`U`X`'\` ]g`h`c`f`]W`U`'U`b`X`'W`f`c`g`g`!`W`'h`'f`U`'i` b`X`Y`f`g`h`U`b`X`]b`[ `c`Z`[ `c`V`U`'Z`Y`a` ]b`]g`a`g`  
U`b`X`' ]g`'X`Y`g`][`b`Y`X`'h`c`'X`Y`Y`d`Y`b`'m`c`i`'f`'g`\_]`'g`'j`b`'W`]h`e`i` ]b`[ `g`W`X`c`'U`f`m`' ]h`Y`f`U`h`'f`Y`z`'W`e`b`g`h`f`i` W`]b`[ `m`c`i`'f`'c`k`b`'U`f`[`i`a`Y`b`h`g`  
U`b`X`'W`e`b`X`i` W`]b`[ `f`Y`g`Y`U`f`W`X`' @`Y`W`h`'f`Y`g`'k` ]'`d`f`c`j` ]X`Y`'W`f`i` W`]U`'V`U`W`\_`[`f`c`i`b`X`' ]b`Z`c`f`a` U`h`c`b`'U`b`X`' ]b`h`c`X`i` W`'m`c`i`'h`c`'\_`Y`m`  
X`Y`V`U`H`Y`g`z`h`]b`\_`Y`f`g`'U`b`X`'h`Y`a` Y`g`'j`b`'Z`Y`a` ]b`]g`h`'\` ]g`h`c`f`m`U`b`X`' [ Y`b`X`Y`f`'g`h`i`X`]Y`g`'`b`'h`'h`c`f`]U`'g`z`m`c`i`'k` ]'`d`U`f`h`]W`d`U`H`Y`' ]b`  
X`]g`W`'g`g`]c`b`'c`Z`h`Y`'g`W`X`c`'U`f`g`'\`d`'U`b`X`'Y`W`h`'f`Y`'a` U`H`Y`f`]U`'z`[`i` ]X`Y`X`'V`m`h`'h`c`f`]U`'e`i` Y`g`h`c`b`g`'M`c`i`'k` ]'`U`'g`c`'Z`U`W`]h`U`H`Y`  
c`b`Y`'h`'h`c`f`]U`'X`]g`W`'g`g`]c`b`'V`m`]b`h`c`X`i` W`]b`[ `b`Y`k`'a` U`H`Y`f`]U`'U`b`X`#`c`f`'e`i` Y`g`h`c`b`g`'h`c`'m`c`i`'f`'W`U`g`g`a` U`H`Y`g`z`h`Y`f`Y`V`m`  
Y`I`'h`Y`b`X`]b`[ `m`c`i`'f`'f`Y`g`Y`U`f`W`X`'U`b`X`'U`b`U`'m`h`]W`U`'g`\_]`'g`"A`m`h`Y`U`W`X`]b`[ `g`h`f`U`H`Y`[`m`]g`'h`c`'Y`b`W`e`i`f`U`[`Y`'m`c`i`'f`'W`]h`]W`  
Y`b`[`U`[`Y`a`Y`b`h`k`]h`'W`e`i`f`g`Y`'a`U`H`Y`f`]U`'U`b`X`'h`c`'\`Y`'d`'X`Y`j`Y`'c`d`'m`c`i`'f`'k`f`]h`Y`b`'U`b`X`'j`Y`f`V`U`'W`e`a`a`i`b`]W`]h`c`b`'h`f`c`i`[`\`  
W`U`g`g`X`]g`W`'g`g`]c`b`'U`b`X`'k`f`]h`Y`b`'f`Y`g`d`c`b`g`Y`g`'h`c`'g`Y`'Y`W`h`X`'h`'h`c`f`]U`'e`i` Y`g`h`c`b`g`'H`Y`'W`e`i`f`g`Y`'k` ]'`Z`'f`h`Y`f`'X`Y`j`Y`'c`d`  
m`c`i`'f`'f`Y`g`Y`U`f`W`X`'h`f`c`i`[`\`U`'f`Y`g`Y`U`f`W`X`'Y`g`g`U`m`k`'\`X`]h`'f`Y`e`i` ]f`Y`g`'m`c`i`'h`c`'i`b`X`Y`f`U`\_`Y`' ]b`X`Y`d`Y`b`X`Y`b`h`f`Y`g`Y`U`f`W`X`'c`b`U`  
g`d`Y`W`]Z`]W`h`c`d`]W`

# 5ggYgga Ybh

F Yei ]fYa Ybtg Zcf K f]hYb K cf\_

Gi Va ]gg]cb

Hi hcf]U`dUdYfg`UbX`fYgYUfW`YggUm`g\ci`X`VY`gi Va ]hX`Y`YWfcb]W`mhc`Hi fb`#`#`cb`A ccX`Y`D`YUgY`  
gi Va ]hlc`hY`Hi fb`#`#`dcftU`k ]h`mci`f`h`hcf`g`bUa`Y`cb`]h`

F YZYfYbW]b[

5ggYgga YbhHUg\_g`

5ggYgga YbhHUg_	K Y)[ \h	8i Y`8UH`	Gh XYbh@YUfb]b[ Ci hWta Yg`5ggYggYX
Hi hcf]U`F YgdcbgYg`	()	DUfh=Xi Y`YbX`cZK ? `) žDUfh =YbX`cZK ? `%	%žž
F YgYUfW`YggUm	( \$	%) #/\$#&\$% `\$(. \$\$`DA	&ž ž(
Hi hcf]U`ZUW`]h]cb`UbX fYZYV]cb`	%)	C bW`Xi f]b[ `gYa YghYf	&ž

5ggYgga Ybh8YH]`g

5ggYgga Ybh%`Hi hcf]U`F YgdcbgYg

GHUfhXUH.`

8YH]`g. `5Wcgg`h`Yg`Ya`Yb`Zg`h`X`Y`b`k`U`b`g`k`Y`f`g`|`e`h`d`g`h`b`k`f`h`b`Z`fa` `VUgYX`cb`h`Y`f`  
 Yb[ U[ Ya Ybhk ]h`h`hcf]U`fYUX]b[ g`UbX`W`i`fgY`W`b`h`b`h`9UW`fYgdcbgY`]g`UddfcI`ja`UH`m&\$\$`k`cfXg`"Hk`c`  
 UfY`Xi`Y`Uh`h`Y`YbX`cZK`YYV` %o` %o`

kYY\_g"

5g'mci 'k ]'gYYžhYfY'jg'U'a ]l 'cZei Yghcbg'—'gca Y' ]bj ]h'U'a cfY'XYgW]dhj Y'fYgdcbgYžchYfg'ZcW'g'cb  
UbU'mg]g'UbX' ]bZcfa YX'cd]b]cbžchYfg'U'a ]l 'cZVch'f]Y" 'mci 'XYa cbglfUHY' 'mci '\Uj Y'i bXYfglcX'U  
VčbW'dhcf'Uf[ i a YbhUbX' hYb' 'mci 'Yb[ U[ Y'k ]h' ]hW]h]W]nž'hUh]g' 'mci 'UggYgg' ]hZU'f'm' 'h]g' bchU'k Umg  
bYW'ggUfmlc' Yb[ U[ Y'k ]h' YUVX' fYUX]b[ 'Zc'f'hUhk YY\_ ]Z'hY'fYUX]b[ ' ]g' bchX]fYW'mifY'Yj Ubhlc' h'Y  
ei Ygh'cb" '8c' [ Yh]bhc' h'Y '\UV]hcZfYZff]b[ 'hc' gVXc'Ufg' Vmi'hY]f'bUa Y' fU'hYf'hUb' i' g]b[ 'h'Y' [ YbYf]W'hYfa  
'h'Y'fYUX]b[ #g'" 'Gca Y'h]a Yg'h'Y' 'YW'h' fY'k ]' '\Y'd' 'mci 'Ubgk Yf'h'Y'ei Ygh'cbžVi hU[ U]b' ]h]g' bchbYW'ggUfmlc'  
a Ybh'cb' h'Y' 'YW'h' fY' ]Z'h' ]g' ]g' bch'h'Y' 'WUgY'" '9I hfU'fYUX]b[ ' ]g' bchYI dYW'YX'Vi h]Z'mci 'Xc' Z'bX'a U'h'f]U'  
fY'Yj Ubhlc' h'Y'ei Ygh'cb' mci 'WU' ]b'W' XY' ]ž'Vi hbchUh'h'Y'YI dYbgY' cZ'h'Y' YggYbh]U'fYUX]b[ "'f5bX'U'k Umg  
fYZfYbW' ]Z'mci 'Xc'É"

Hi fb]h]b'gYh]b[ . 'H\]g'Ugg][ ba Ybh]g'gi Va ]h'X'h'fci [ \ 'Hi fb]h]b'UbX'gh XYb]g'Xc' bchgYY'Hi fb]h]b  
g]a ]Uf]mifYdcf'g"

5ggYgga Ybh&. F YgYUfW' YggUm

GHUfhXUH'.

@Yb[ h. '&\$\$\$'k cfxg

8YHU]g. 'Gh XYb]g'k f]h'U'fYgYUfW' YggUm'cZ&\$\$\$'k cfxg'YI W' X]b[ 'h'Y'V]V]c[ fUd\m'f': YYXVUW\_ ]U'fi Vf]W  
UbX' ]bX] ]Xi U' 'Wča a Ybh]g'" 'H\]g' ]g' h'Y' Z]bU' 'UggYgga YbhZc'f'U'h'Y'UbX'UbW' 'di fdcgYg"

5XX]h]cbU'XYHU]g.

F 9G95F 7< '9GG5MžXi Y'A cbXUm%) h' 'C'W'c'VYf'Vm(da "'Gi Va ]h]c' 'Hi fb' 'h'č'cb'A ccX'Y"

: YYXVUW\_ 'Mci f'fYgYUfW' YggUm'k ]' 'VY'a Uf\_YX'Y'YW'fcb]W]m'k ]h'X]fYW'h]Z'YXVUW\_ 'cb' h'Y' YggUm]h]g'Y'Z  
UbX'j ]U'U'fi Vf]W'hUhUggYggYg'Uf[ i a YbhUbX' UbU'mg]gžgm'Y'UbX'ghf' W'h' fY'UbX'fYgYUfW' 'UbX'fY'ZfYbW]b[ "  
H\Y'fYgYUfW' YggUm'k ]' 'VY'a Uf\_YX'k ]h' ]b'U'Zc'f]b][ \h'

Gi Va ]gg]cb. '9ggUm]g'g\ci 'X'VY': I @MfY'ZfYbW'Xž]XYU'mi'g]b[ 'h'Y'dfY'ZfYX'GW'cc'Gm'Y'—'Zc'f'bc'h'  
UbX'V]V]c[ fUd\mf'7 \]W]c'cf'Cl Zc'fX'ž'gYY.

[\h\]dg.#gh XYb\]h'i bgk "YXi "Ui #Zc'f'bc'h'!V\]V\]c\[ fUd\m'f'cl Zc'fX'fY'ZfYbW\]b\[ !gm\]h'a](#)

žmci 'i gY' ]b]h]i hž'd'YUgY' i gY' < Uj UfX'fUg' ]h]b'W' XYg'dU[ Y'bi a VYfg'É

[\h\]dg.#gh XYb\]h'i bgk "YXi "Ui #Uf\] UfX'fY'ZfYbW\]b\[](#)

9ggUmE i Ygh]cb.

Hi fb]h]b'gYH]b[ . 'H\]g'Ugg[[ ba Ybh]g'gi Va ]mY'k.fci [ \ 'Hi fb]h]b'UbX'ghi XYbhg'WUb'gYY'Hi fb]h]b'ga ]'Uf]m fYdcfng"

5ggYgga Ybh' . 'Hi hcf]U'ZUW]j]h]h]cb'UbX'fYZYW]cb

GHUfhXUHY. '5gg[[ bYX']b'K ? '&'h' hcf]U'

@Yb[ h. ) 'a ]bi hYg

8YHU]g. 'H\]g'UggYgga Ybh'Ug'k c'dUfng": ]fgh'ghi XYbhg'k ]''Ui bWX'X]gW'gg]cb'k ]h'U'Vf]YZHU' \_'fbc'a cFY h'Ub'Z]j'Y'a ]bi h'g'UVci h'hY]f'ck b'Yb[ U[ Ya Ybhk ]h'XYg[[ bUH'X'fYUX]b[ g#cd]Wg'f%\$i 'E'GYW'cbX'm'z'h'Ym k ]''k f]h'U'Vf]YZfYZYW]cb'f%) \$!&\$ \$'k c'fXg'UVci h'hY'd'fcW'gg'c'Zd'fYd'Uf]b[ z'W'cbXi W]b[ z'UbX'fYW]j ]b[ ZYXVUW' \_'cb'h'Y'ZUW]j]h]h]cb'f) i 'E': YXVUW' \_'j ]U' ]bX]j ]Xi U'W'ca a Ybhg'cb'Vch'W'ca dcbYbhg"

5XX]h]cbU'XYHU]g.

HI HCF =5@: 57 @+H5H=C Bžk YY\_ 'Ugg[[ bYX']b'Z]fgh'hi hcf]U'z]b'WUgg'UggYgga Ybh'

K Y][ \ h '%\$i 'Z'f'ZUW]j]h]h]cb'UbX') i 'Z'f'fYZYW]j Y'fYgdcbgY'h'Ya U]'ZYXVUW' \_'h'h'Y'ZUW]j]h]h]cb'-'h'c'U' % ) i

8YgW]dh]cb.: fca 'K YY\_' zYUW' h' hcf]U'k ]''\Uj Y'cbY'c'f'k c'XYg[[ bUH'X'ZUW]j]h]h]cb'f]Ugg[[ bYX']b'Z]fgh' hi hcf]U' ]b'K YY\_ '&'E' H'Y'ZUW]j]h]h]cb'k ]''Ui bWX'X]gW'gg]cb'k ]h'U'6F =>: 'fbc'a cFY h'Ub'Z]j'Y'a ]bi h'g'UVci h'hY]f'ck b'Yb[ U[ Ya Ybhk ]h'h'Y'fYUX]b[ #cd]W' H'Y' ]XYU' ]g' i gY'mci f'ck b' i b]ei Y'dUH'k Um'h'fci [ \ h'Y'a UH'f]U' \_'h'cdYb' i d'X]gW'gg]cb' bch'cb'micZ'h'Y'W'cb'h'Y'bh'z'Vi h'U'gc'cZ]h]k ]XYf' i h] ]m'

'K ]XYf' i h] ]m' W'ci 'X'a YUb'a U\_]b[ 'W'cb'YW]h]cbg'VY'h'YYb'h'Y'fYUX]b[ #cd]W'UbX'W'cb'h'Y'a d'cfU'f'm'Z'Y'a ]b]ga g/ i g]b[ 'h'Y'a UH'f]U' \_'Ug'U' ^ a d]b[ 'cZ]dc]bh'hc'YI d'c'fY' d'Uf]h]W' \_'Uf'h'Ya Yg#ei Yg]h]cbg#YI Ua d'Yg#h]b\_]Yfg# Z'Y'a ]b]ga g' ]b'U' ]h'Y'a cFY 'XYHU] /c'f'Ug'U'a YUb'g'hc'fYZYW]h]cb' \ck 'gW'c'Ufg'XYj Y'cd'Uf[ i a Ybhg'fY[ " mci W'ci 'X'X]gW'gg'h'Y'fYUX]b[ 'Ug'Ub'YI Ua d'Y'cZU'd'Uf]h]W' \_'Uf'Udd'fcUW' #ghm'Y' h'U'h'mci 'Zci bX' i gYZ' 'c'f i bdfcXi W]j Y'c"

Hfmbch'hc'h]b\_ 'UVci h'h]g'Ug'U'bUff'ck 'mXYZ]bYX'YI YfW]gY' ]b'k \ ]W'h'YfY'UfY'f] [ \ h'UbX'k fcb[ 'fYgdcbgYg h'c'h'Y'a UH'f]U' " F U'h'Yf' ]h]g' \cdYX'h'U'h]g'YI YfW]gY'YbW'ci fU[ Yg' i g'hc'h]b\_ 'UbX' \_'U'UVci h'hY'd'fcW'ggYg UbX'dcgg]V] ]h]Yg'cZgW'c'Uf'm'Yb[ U[ Ya Ybh' ]h]g'U'gc' \cdYX'h'U'h]g'YI YfW]gY'YbW'ci fU[ Yg'gh' XYbhg'hc' YI d'c'fY'h'Y]f'ck b'W'f]cg]m'z'Y[ " 'Vm' [ cc[ ]b[ 'U'W'cbW' dh#Z'a ]b]gh'Y'h'W'Z'f'Z' f'h'Yf' ]b]Z'fa U]h]cb"

B'G<CFH. '8c' bch'Ub'gk Yf'h'Y'hi hcf]U'ei Yg]h]cbg' 'h'U'h]g'Z'c'f'k \c'Y' [ fci d' 'fUH'Yf'c'Z'Yf' i g'mci f c]f[ ]bU' h'ci [ \ h]g'UbX'bUj ] [ U]h]cb'cZ'h'Y'a UH'f]U' \_'UbX' ]h]k ]XYf'g][ b]Z]W'UbW'W"

Mci 'W'Ub'gd'YU' \_'h'U'bi a VY'f'cZ'X'chdc]bh]g'UbX' #c'f'fYUX'ci h] YfVU]h]a 'k \U'h'mci 'Uj Y'd'fYd'UfYX' ]b'UX] UbW' f'h'Y'Z]fgh'Udd'fcUW' \_'bcfa U' 'mk c'f\_g'VY'h'Yf' ]b' h'Y'fa g'cZ[ Yb'YfU]h]b[ 'X]gW'gg]cb'c' Mci 'Xc' bch' \Uj Y'hc'gi Va ]h' Ubm'h]b[ ]b'k f]h]b[ 'Vi h'mci 'Xc' \Uj Y'UW'W'gg'hc'h'Y' 'Y'W' h' fbz' ]Y' " b[ 'Vi h ch



hc'mci f'hi hc'f'Uh'YUghUb'\ci f'VYZcfY'h\Y'hi hc'f]U"

: UW]hUhc'fg'a UmYbX'i d'ZcW'gg]b[ 'cb'h\Y'gUa Y'cf'g]a ]Uf'UgdYW'g'cZ'hY'fYUX]b[ žk \]W' ]g'Z]bY. 'h.]g'k ]`  
[ ]j Y'i g'U'gdf]b[ VcUfX'h'X]gW'gg'Ug'U'WUgg'k \mi'h.]g'dUfh]W'Uf'hYa Y'gdUf\_YX'gi W' ]b'hY'fYgh'8 ]X'UbmcbY  
Y'gY' ]b'hY'WUgg'Zc'f'YI Ua d'Y'Z]bX'hYa gY'j Yg'XfUk b'hc'h\UhdUfh]W'Uf'UgdYW'g'cZ'U'fYUX]b[ 'cf'hYa Y  
UW'cgg'hY'fYUX]b[ g3' b'bc'a cfY'hUb': =] 9'a ]bi hYg'hfmiUbX'XYa cbgfhU'h' #fYgdc'bX'h'hc'hY'Z'ck ]b[ .

%"

F 9: @97H€B. f) i ŁfUddfcI ja UH'm%) \$'k cfXgŁ

8i Y. i d'hc'U'k YY\_'UZf'f'mci f'hi hcf'gYbXg'ZYXVUW\_'hc'h'Y'ZUW']fU]cb"

Gi Va ]gg]cb. 'GYbX'hc'hi hcf'X]fYWhmVmYa U]'cf'j ]U'A ccX'Y'"Mci 'WUb'U'fUW'Ug'U'k cfX'Z'Y'cf'k f]f'X]fYWhm ]bhc'h'Y'Ya U]"

5]a . 'K f]f'f'ZYW]j Y'mUVci h'h'Y'dfcW'gg'cZfYgYUfW]b[ ždfYgYbh]b[ 'UbX'f'YW]j ]b[ 'ZYXVUW\_'cb'mci f ZUW']fU]cb'" Mci 'WUb'W'ccgY'hc'Ya d\Ug]gY'cbY'dUfhcZ'h'Y'dfcW'gg'c] Yf'h'Y'c'h'Yfgž'Zcf'YI Ua d'Y.

! \Uj ]b[ 'f'YW]j YX'k f]f'f'ZYXVUW\_'žmci 'a Um'W'ccgY'hc'f'ZYW]cb'k \Uhmci 'Wci 'X' \Uj Y'XcbY'X]ZYfYbhimhc ]a d'fcj Y'mci f'f'Ygi 'h'CF

! 'mci 'a Umi gY'h'Y'cddcfhi b]hmcZfYZYW]cb'hc'fi a ]bU'f'cb'h'Y'f'YgYUfW' 'dfcW'gg. 'Y[ "'VmZ' f'h'Yf Y'UVcfU]b[ 'cb' \ck 'mci 'k \m'mci 'W'cgY'hc'Xc'gca Y'a cfY'f'YgYUfW' 'cb'U'dUfh]W' 'Uf'UgdYW'hcZ'h'Y'hc'd]WC F

! 'mci 'a Um'f'ZYW]cb'h'Y'UggYgga Ybh'UbX']h'g'i h']m'Ug'U'k \c'YžY[ "'d'fcj ]XY'ZYXVUW\_'cb'k \Y'h'Yf'cf' bch h' ]g'UggYgga Ybh' \Ug'V'Y'Yb'U'i gYž 'k Um'hc'YI d'cfY' [ 'c'VU'Z'Ya ]b]ga g'CF

! 'U[ YbYfU'f'ZYW]cb'cb'h'Y'hc'd]W'W'ci fgY']h'g'Y'Zi g]b[ 'mci f'ZUW']fU]cb'Ug'U'gd'f]b[ 'VcUfX"

< ck 'hc'UddfcUW' h' ]g'UggYgga Ybh' h' ]g' ]g' bch'U'Zcfa U'f'YgYUfW' 'UbX'k f]f]b[ 'YI YfW]gY'f]Y'" bchUb YggUm'Ł' F U'h'Yf']h]g'XYg][ bYX'hc' [ Yhmci 'hc'f'ZYW]cb' \ck 'mci f'f'YgYUfW'ždfYgYbh]cb'UbX'#cf ]b'h'fd'f'Yh]j Y'g\_]`g'UfY'XYj Y'cd]b[ 'Ug'h'Y'W'ci fgY'dfc[ f'YggYg'"D'fcj ]XYX'mci 'W'ca a i b]W'U'f'f'Y'XYUg WYUf'm'UbX'XYa 'cbgh'U'f' [ Ybi ]bY'f'ZYW]cb'žmci 'k ]`f'YW]j Y'Z' `a Uf\_g'Zc'f'h' ]g'UggYgga Ybh'

: YYXVUW\_. 'Mci f'f'ZYW]cb'k ]`VY'f'Ygdc'bXYX'hc'j ]U'Ya U]'k ]h' ]b'U'k YY\_'cZfYW]j ]b[ 'j'h'

Hi fb]h]b'gY'h]b[ . 'h' ]g' ]g' bch'U'Hi fb]h]b'Ugg][ ba Ybh

Gi Va ]gg]cb'cZ5ggYgga YbhHUg\_g

Gh XYbHg'UfY'YI dYW'X'hc'di h'Y]f'bUa Yg'UbX'gh XYbhbi a VYfg'cb'Yj YfmdU[ Y'cZ'Y]f'Ugg][ ba Ybhg"

Hi fb]hb'Gi Va ]gg]cb

zmc i'YbWci bhYf'U'dfcV'Ya'k \Yb'U'HYa dh]b[ 'hc'gi Va ]hmc i f'Ugg][ ba Ybh'fci [ \ 'Hi fb]hb'z'd'YUgY  
HY'Yd\cbY'9I HYfbU'Gi ddcfh'cb'-' , ) ' ' ' %cf'Ya U]'h'Ya 'cb' [YI HYfbU'HY'f'gi ddcfh' i bgk "YXi "Ui."](#) Gi ddcfh  
\ci fg'UfY' , .\$\$Ua '-%\$. \$\$da 'cb'k YY\_XUmg'UbX'-. \$\$Ua '-) . \$\$da 'cb'k YY\_YbXg'f'\*) 'XUmg'U'm'Uf'z' zmc i  
UfY'i bUV'Y'hc'gi Va ]hmc i f'Ugg][ ba YbhXi Y'hc'U'Zi 'hk ]h'Hi fb]hb' b' mci 'a UmiUdd'm'Z'f'Ub'YI HYbg]cb'z'Vi hmc i  
a i gh'f'Y]b' mci f'h]W\_Yhbi a VYf'Z'ca '9I HYfbU'Gi ddcfh'f'U'cb[ 'k ]h'Ubmc'h'Y'f'f'Y'j Ubh'X'c'W a Ybh'g'k'hc  
]b'W' XY'Ug'Yj ]XYb'W'hc'gi ddcfh'mci f'YI HYbg]cb'Udd' ]W]h'cb" zmc i 'Ya U]'9I HYfbU'Gi ddcfh'mci 'k ]`  
Ui 'ca U]W'W'm'f'Y'W'j Y'U'h]W\_Yhbi a VYf'z'Vi h]Zmc i 'HY'Yd\cbY'mci 'k ]`b'Y'X'hc'gd'Y'W]W'm'Ug\_'Z'f'cbY"  
Hi fb]hb'U'gc'd'fcj ]XYg'i dXU'Y'g'cb'h'Y]f'g'm'gh'Ya 'gh'U'h'g'cb'Hk ]h'Y'f"

; YbYfU'm'z'UggYgga YbhHUg\_g'a i gh'VY'gi Va ]h'Y'X'Y'Y'W'f'cb]W'm'j ]U'Y]h'Y'f'Hi fb]hb'cf'U'A cc'X'Y  
Ugg][ ba Ybh'f' b ]bg'h'Ub'W'g'k \Y'f'Y'h' ]g' ]g' b'chid'cgg]V'Y'z' ]h'k ]`VY'g'h'Y'X'cb' mci f'W'ci fg'Y'g'A cc'X'Y'g]h'k ]h'  
U'h'f'Y]b]h'j Y'gi Va ]gg]cb'XY]h]g"

@U'Y'5ggYgga Ybh'DYbU'h]Yg

Gh XYbHg'UfY'f'Yg'd'cbg]V'Y'Z'f'h'Y'gi Va ]gg]cb'cZ'UggYgga YbhHUg\_g'V'm'h'Y'f'Yei ]f'Y'X'X'U'Y'g'Ub'X'h'a Yg"  
8Yd'Yb'X]b[ 'c'Z'Y'YI HY'bh'c'Z'X'Y'Um]b'h'Y'gi Va ]gg]cb'cZ'Ub'UggYgga YbhHUg\_'d'Ugh'h'Y'Xi Y'X'U'Y'Ub'X'h'a Yz

- K cf\_gi Va ]hYX`%\$`hc`%-`XUmg`UZhYf`h`Y`gh]di`U`hYX`XYUX`]bY`k`j`VY`UggYggYX`UbX`ZYXVUW`dfcj`]XYX`Vi`hU`a`Uf`\_`cZnYfc`k`j`VY`fYW`fYX`" `Z`hY`k`cf`\_`k`ci`X`\\Uj`Y`fYW`]j`YX`U`dUgg`a`Uf`\_`Vi`hZcf`hY`U`hY`bYgg`UbX`hY`k`cf`\_`]g`U`W`a`di`gcfm`W`i`fgY`W`a`dcbYbhf`i`fX`Y`fYei`]fYa`YbH`Z`U`gh`XYbhk`]`VY`XYa`YX`h`\\Uj`Y`a`Yh`h`UhfYei`]fYa`Ybh`
- K cf\_gi Va ]hYX`&\$`cf`a`cfY`XUmg`UZhYf`h`Y`gh]di`U`hYX`XYUX`]bY`k`j`bchVY`U`W`W`d`hYX`Zcf`UggYgga`Ybh`UbX`k`j`fYW`]j`Y`bc`ZYXVUW`z`a`Uf`\_`cf`[`fUXY`" `Z`hY`UggYgga`Ybh`Ug`\_`]g`U`W`a`di`gcfm`W`a`dcbYbhcZ`hY`W`i`fgY`U`gh`XYbhk`]`fYW`]j`Y`Ub`l`bgUhgZ`U`W`c`fm`:`U`]`fl`:`k`[`fUXY`Ug`U`fYgi`h`cZ`i`bgUhgZ`U`W`c`fmdYfZ`fa`UbVW`]b`Ub`YggYbh]U`W`a`dcbYbhcZ`hY`W`i`fgY`"

H\]g`]bZ`fa`U`h`cb`]g`U`gc`Uj`U`]\$

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## 5 WUXYa ]W<c bYghmUbX`D`U[ ]Uf]ga

D`U[ ]Uf]ga ]g`i g]b[ `hY`k cfXg`cf]XYUg`cZchYfg`UbX`dfYgYbh]b[ `hYa`Ug`mci f`ck b`" #WUb`hU`Y`a Ubm Zcfa gZ`Zca`XY`]VYfUHY`WXU]b[ `hc`UW]XYbhU`mW`dm]b[ `Zca`U`gci fW`k ]h`ci hUW\_bck`YX[ Ya`Ybh`

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

7cdm]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`chU]cb`a`Uf\_g`"H`]g`U`gc`Udd`Yg`hc`]a`U[ YgZ`UfhUbX`XYg][ ]b`dfc`YWgZ`Ug`k`Y`U`g`dfYgYbhU]cbg`k`Y`fY`gca`YcbY`dfYgYbhg`UbchY`f`g`]XYUg`cf`k`cfXg`k`]h`ci hW]YX]h`

#Uddfcdf]UHY`dUfUd`fUg]b[ .`7`U`b[ ]b[ `U`Z`k`k`cfXg`UbX`d`fUgYg`k`Y`a`cghmifYU]b]b[ `hY`cf][ ]bU`g`fi`W`fY`UbX`#`f`dfc`[ fYgg]cb`cZ]XYUg`cZ`hY`cf][ ]bU`Z`UbX`]bZcfa`U]cb`k`]h`ci hUW\_bck`YX[ Ya`Ybh`H`]g`U`gc`Udd`Yg`]b`dfYgYbhU]cbg`k`Y`fY`gca`YcbY`dUfUd`fUgYg`UbchY`f`g`]XYUg`cf`k`cfXg`k`]h`ci hW]YX]hUbX`hc`d]Y]W]b[ `hc[ Y`hY`f`ei`chYg`UbX`dUfUd`fUgYg`]bhc`U`bYk`k`Y`c`Z`k`]h`ci hUddfcdf]UHY`fYZYfYbW]b[ "

7c`i`g]cb.`k`cf\_]b[ `k`]h`chYfg`Vi`hdUgg]b[ `cZ`hY`k`cf\_]Ug`U`dYfgcb`g`]bX]j`]Xi`U`k`cf\_]7c`i`g]cb`U`gc`]bW`i`XYg`dfcj`X]b[ `mci`f`k`cf\_]hc`UbchY`f`gh`XYbhVY`Zc`fY`hY`Xi`Y`XU]h`Zc`f`Zc`f`hY`di`fdcgY`cZ`hY`a`d`U[ ]Uf]g]b[ `Uh`Ubm]h`a`Y`Z`dUm]b[ `UbchY`f`dYfgcb`hc`dY`Zc`fa`Ub`UW]XYa`]W]Ug`\_`Z`gh`U`]b[ `cf`U`W`ei`]f]b[ `UbchY`f`dYfgcb`g`UW]XYa`]Wk`cf\_]UbX`W`dm]b[ `]h`c`Z`Y`f]b[ `hc`W`ca`d`Y`h`UbchY`f`dYfgcb`g`k`cf\_]cf`g`Y`Y\_]b[ dUma`Ybh`Zc`f`W`ca`d`Y`h]b[ `UW]XYa`]Wk`cf\_]`

#Uddfcdf]UHY`W]hU]cb.`7`]h]b[ `gci`fW`g`k`]Wk`U`j`Y`bchVYYb`fYUX`Z`k`]h`ci hUW\_bck`YX[ ]b[ `hY`"gY`W`bXUfm`gci`fW`Zc`a`k`]Wk`\_`bck`YX[ Y`cZ`hY`a`U`g`VYYb`cV]h]bYX`"

8i`d`]W]h]cb`f`fY`Z`d`U[ ]Uf]ga`"L`gi`Va`]h]b[ `mci`f`ck`b`k`cf\_]Z`]b`k`Y`cf`]b`dUf]Z`k`Y`fY`]h`U`g`d`fY`]ci`g`m`VYYb`dfY`dUfYX`cf`gi`Va`]hYX`Zc`f`UbchY`f`UggY`gga`Ybhcf`W`ci`fgY`U`hI`BGK`cf`UbchY`f`i`b]j`Yfg]m`"

7c`f`fY`W`i`fY`ZY`fY`bW]b[ `d`fU`W]W]g.

- DUfUd`fUg]b[ `Z`gi`a`a`Uf]g]b[ `Z`YggUm`k`f]h]b[ `UbX`h`a`Y`a`UbU[ Ya`Ybh`
- 5ddfcdf]UHY`i`gY`cZ`UbX`U`h]f]Vi`h]cb`Zc`f`U`fU]b[ Y`cZ`a`U`hY`f]U`g`]bW`i`X]b[ `hY`i`h`]a`U[ YgZ`Zc`fa`i`UY`UbX`W`b`W`d]g`"

#X]j`]Xi`U`U`gg]gh`UbW`]g`U`j`U`]UV`Y`cb`fY`ei`Y`gh`Zc`a`H`Y`@`Y`f]b[ `7`Y`bhY`f`[f`h`td`#`k`k`"Wi`bgk`"YXi`"Ui`#`](#)`G`h`XY`bhg`U`fY`U`gc`fY`a`]bXYX`h`U`h`W`fY`Z``h`a`Y`a`UbU[ Ya`Ybh]g`Ub`]a`dc`f]U`bh`d`U`f`h`c`Z`g`h`X`m`UbX`c`b`Y`c`Z`h`Y`a`]XY`bh]Z`Y`X`W`li`gY`g`c`Z`d`U[ ]Uf]ga`]g`d`cc`f`h`a`Y`a`UbU[ Ya`Ybh`G`h`XY`bhg`g`l`ci`X`U`ck`g`i`Z`Z`W]Y`bh]h`a`Y`Zc`f`Y`g`Y`U`f`W`Z`X`f`U`Z]b[ `UbX`d`f`c`d`Y`f`fY`ZY`fY`bW]b[ `cZ`gci`fW`g`]b`d`fY`dUf]b[ `U`U`ggY`gga`Y`bh]h`Y`a`g`"

I BGK`@`]V`fUfm`U`gc`U`g`hY`9`@`G`9`hc`U`j`U`]UV`Y`hc`U`gg]gh`mci`k`]h`mci`f`gh`X`m`U`hI`BGK`"9`@`G`9`]g`XY`g][ ]bYX`hc`]b`f`c`Xi`W`b`Yk`g`h`XY`bhg`hc`g`h`X`n]b[ `U`hI`BGK`Vi`h]h`W`b`U`gc`VY`U`[ fY`U`h`fY`Z`Y`g`Y`f`Xi`f]b[ `mci`f`gh`X`n`"

7ca`d`Y`h]b[ `hY`9`@`G`9`h`hc`f]U`UbX`ei`]n`k`]Y`b`U`V`Y`mci`hc.

- UbU`mgY`hc`d]WgZ`d`Ub`fY`g`d`c`b`g`Y`g`UbX`cf[ Ub]gY`fY`gY`U`f`W`Zc`f`UW]XYa`]Wk`f]h]b[ `UbX`chY`f`UggY`gga`Ybh]U`g\_g`
- YZY`W]j`Y`m`UbX`Y`Z`Z`W]Y`bh`m`Z]bX`Uddfcdf]UHY`]bZcfa`U]cb`g`ci`fW`g`UbX`Y`j`U`i`U`hY`fY`Y`j`UbW`hc`mci`f`bY`Y`X`g`
- i`gY`UbX`a`UbU[ Y`]bZcfa`U]cb`YZY`W]j`Y`m`hc`U`W`W`ca`d`]g`U`g`d`Y`W]Z]W`di`fdcgY`
- VY`hY`f`a`UbU[ Y`mci`f`h`a`Y`

i bXYfgHUbX'mci f'f][ \hg'UbX'fYgdcbg]V']hYg'Ug'U'gh XYbhUhl BGK









