

5 'ZUhU``WfUg\`]b' \times ZZYfgcb'7cibhm'cb' \ddot - ('WU]a g'cbY``]ZY /]bj Ygh][Uh]cb'ZcW' gYg'cb'WUi gYg'UbX'hfUZZ]WgUZYhm a YUgi fYg"



@U_Y'A]``gž'K]gWcbg]bž'I G5 !! \Rightarrow U'hfU[]W]bW]XYbhž'U'g]b[`Y! j Y\]WY'UWW]XYbh'c\W\'ffYX'bYUf'@U_Y'A]``g']b' \Rightarrow \ZZYfgcb'7cibhm'cb \Rightarrow bY'(z'&\$&) "'H\Y'\C``]g]cb'\UddYbYX'UfcibX', .%%'U"a "'cb k Ygh\VcibX' \Rightarrow hYfghUhY'- ('Uh'h\Y'GhUhY'<][\k Um', -']bh\Yf\\Ub[Y" H\Y'\Xf]j Yfz'k \c'\Ug'mYh'hc'\Y']XYbh]Z]YX'dYbX]b['bch]Z]\W\h]cb'cZ bYI h'cZ'_]bz'j YYfYX'cZZ'h\Y'fcUXk Um'UbX'\C``]XYX'k]h\'U'hfYYz gi ghU]b]b['ZUhU`']b'I f]Yg'UbX'dfcbcib\WX'XYUX'Uh'h\Y'g\WbY" FYa Uf_UV`mz'bc'ch\Yf'dUggYb[Yfg'cf'jY\]\WYg'k YfY']bj c'j YX']b h\]g'i b\ZcfhibUhY'Yj Ybh"

 $H\Y`K\]gWcbg]b`GhUhY`DUhfc``]g``YUX]b[``h\Y`]bj\Ygh][\Uh]cb``]b\hc``h\Y WfUg\``UbX`k\]```gWfi\ h]b]nY`j\ Uf]ci\ g`ZUWhcfg``Wcbhf]Vi\ h]b[``hc``h\Y UWW]XYbh''`H\YgY`]bWi\ XY`dcgg]V`Y`a\ YX]WU``]ggi\Ygž`gdYYXž`UbX`h\Y$

WcbX]h]cb cZh\Y fcUXk Um" > ZZYfgcb 7 ci bhm g gY Wh]cb cZ+- (]g hmd]WU``m'Wk UfUWhYf]nYX Vm'U a]l cZ'Wca a YfW]U``UbX Wca a i hYf hfUZZ]Wza U_]b[gUZYhm']b h\]g UfYU dUfUa ci bh'Ug k Y``!a U]bhU]bYX fcUXg Xc dfYgYbh'gca Y \ UnUfXgzgi Wk 'Ug'[fUgg'a YX]Ubg UbX bUffck 'g\ci `XYfg" + g YggYbh]U``h\ Uh'h\ cfci [\]bj Ygh][Uh]cbg'UfY WcbXi WhYX hc']`i a]bUhY h\Y WUi gYg cZ'gi Wk 'ZUhU`']bW]XYbhg'UbX \Y`d']a dfcj Y gUZYhm'a YUgi fYg 'Zcf'h\Y'Z hi fY"

$H \setminus Y = a \ dUWh \ cZ \ HfUZZ \ WGUZY \ hm \ A \ Y \ Ugi \ fYg$

K]h\ 'hfu[]WuWw]XYbhg``]_Y`h\]gž']h g`]a dcfhubh`hc`Wcbg]XYf`VfcUXYf hfuZZ]WguZYhm`]b]h]uh]j Yg`uWfcgg`K]gWcbg]b"`5g`\][\`][\hYX`Vm` K]HfuZZ]W CdYfuh]cbg`UbX`GUZYhm`@UVcfUhcfm`hc`a U]bhU]b`Ub`]bhYfuWh]j Ya Ud`_bckb`Ug`7ca a i b]hm`A Udg"`H\]g`d`UhZcfa 'hfuW_g`dc`]WY! fYdcfhYX`hfuZZ]WWfUg\ Yg`Zfca '&\$%\$`cbk UfXgž`]bWi X]b[`U```ZUhU`]bW]XYbhg`XUh]b[`VUW_`hc`&\$\$%"`7fUg\ Yg`UfY`i dXUhYX`b][\h`mž dfcj]X]b[`YggYbh]U``XUhU`Zcf`j Uf]ci g`ghU_Y\c`XYfg`XYX]WUhYX`hc]a dfcj]b[`fcUXk Um`gUZYhm"

9UWX 'Wci bhm']b'K]gWcbg]b'\cghg'ei UfhYf`m'a YYh]b[g'h\fci [\HfUZZ]WGUZYhm'7ca a]gg]cbg'fHG7gŁ'h\Uh'Yb[U[Y'`Uk 'YbZcfW'a Ybhž di V`]W\YU`h\'cZZ]W]U`gž'UbX'Yb[]bYYfg"'H\YgY'a YYh]b[g'ZcW'g'cbh\Y' Zci f'9g 'cZ'hfUZZ]WgUZYhm '9bZcfW'a Ybhž'9Xi WUh]cbž 9b[]bYYf]b[ž'UbX'9a Yf[YbWm'A YX]WU``GYfj]WYg"'H\]g'UddfcUWX YbWci fU[Yg'U'Wca dfY\Ybg]j Y'j]Yk 'cZ'fcUX'gUZYhmž'i bXYfgWcf]b[h\Y']a dcfhUbW''cZ'UXXfYgg]b['ZUhU``UbX']b'\fm'WfUg\Yg YZZYWh]j Y`m"

GhfYYh'A Udg. 5 'Hcc` 'Zcf' DfYj Ybh]cb

@cc_]b['XYYdYf']bhc'WfUg\ 'XUhUž'7ca a i b]hm'A Udg'gYfj Yg'Ug'U j U'i UV`Y'fYgci fWY'Zcf'hfUZZ]WgUZYhm'd`Ubb]b['UbX'XYW]g]cb!a U_]b[Uh'h\ Y'`c\WU```Yj Y`"'8U]`m'fYj]Yk g'cZ'U\W]XYbhg'Ybgi fY'h\ Uh'h\ Y'XUhU fYa U]bg'i d!hc!XUhY'UbX'fY`Yj Ubhž'k \]`Y'h\ Y'd`UhZcfa g U\W\Ygg]V]`]hm'dfcj]XYg'YggYbh]U`']bg][\hg'Zcf'cb[c]b['gUZYhm]b]h]Uh]j Yg"

H\Y'fYWYbh']a d`Ya YbhUh]cb'cZ'U'hYa dcfUfm' CdYb'FYWcfX
FYj]Yk 'fYghf]Wh]cb'hc'bYk 'WfUg\'fYdcfh'D8: gž'gdi ffYX'Vm'df]j UWh dfchYWh]cb'fYei]fYa Ybhgž'fYZYWhg'h\Y'XY`]WUhY'VU`UbWY'VYhk YYb di V`]WUWWci bhUV]`]hm'UbX']bX]j]Xi U`'df]j UWm'f][\hg''8Ygd]hY'h\YgY fYghf]Wh]cbgž'h\Y'gYUfW\'WUdUV]`]h]Yg'Zcf'hfUZZ]WXUhU'fYa U]b']bhUWhž Ya dck Yf]b['Wca a i b]h]Yg'hc'UbU`mnY'UbX'UXXfYgg'gUZYhm WcbWYfbg'YZZYWh]j Y`m'

5g'h\Y']bj Ygh][Uh]cb'Wcbh]bi Yg']b'*\text{ZZYfgcb'7cibhmz'gifj]j]b[
ZUa]`m'a Ya VYfg'cZ'h\Y'XYWYUgYX'Xf]j Yf'a Um'ZUWY'bi a Yfcig
W\U``Yb[Yg']b'h\Y'k U_Y'cZ'h\]g'hfU[YXm''@Y[U``UbX'Z]bUbW]U`
]a d`]WUh]cbg'WUb'`cca '\YUj]`mz'a U_]b['fYgcifWYg'`]_Y'Wcaaib]hm
giddcfh'UbX'hfUZZ]WgUZYhm'Wcaa]gg]cbg']bj U`i UV`Y']b'\Y`d]b[
h\YgY'ZUa]`]Yg'bUj][UhY'h\fci[\'X]ZZ]W'`h'h]aYg''

8 Y hU]`g	
Cfh	@U_Y`A]``gž'K]gWcbg]bž'lG5
EiY``Yb	• `c WU`U WW]XYb hfYd c fhg"Wc a
	k]gWcbg]bXch"[cj
	hfUbgdcfhU`"WYY"k]gWYXi

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