## 5 'ghi XYbh'Zfca '7c`ca V]U'hU` g'UVci h'ghi Xm]b[']b'h\Y ]bhYfbUh]cbU``A UghYffq'XY[fYY'dfc[fUa 'Uh'GDVDI

"A ][ i Y``A cbhUbU`WUa Y`hc`Fi gg]U`Zfca '7c`ca V]U"`Bck 'A ][ i Y``]g`ghi Xm]b[ 'Zcf U`a UghYf g`XY[ fYY`Uh`h\Y` $\pm$ bgh]hi hY`cZ'7ca di hYf`GW]YbW'`UbX`HYW\bc`c[ m" < ]g`W\c]W\g`h\Y`]bhYfbUh]cbU``YXi WUh]cbU``dfc[ fUa '~ $\pm$ bhY``][ Ybh`GmghYa g" "'5Vci h`h\Y`XYW]g]cb hc`Wca Y`hc`Fi gg]Už'h\Y`gYUfW\'Zcf`U`i b]j Yfg]hm`UbX`Ub`YXi WUh]cbU``X]fYWh]cbž'Ug`k Y``Ug`UVci h`h\Y`X]ZZ]W``h]Yg`cZ`UXUdhUh]cb`UbX`ZUj cf]hY`d`UWYg`]b`Gh"`DYhYfgVi f[ 'fYUX ]b`ci f`]bhYfj ]Yk "'

- Bck 'mci 'ghi Xm'A UghYf g'XY[fYY'dfc[fUa "'K \Uh'X]X'mci 'ghi Xm'VYZcfY3 K \Uh'i b]j Yfg]hm'X]X'mci 'ghi Xm3'
- "DfYj ]ci g`m'=ghi X]YX'a YWXUhfcb]Wg'Yb[]bYYf]b[ 'Ug'a m'i bXYf[ fUXi UhY'XY[ fYY Uh'h\Y'd]`ch'i b]j Yfg]hm'cZ'7c`ca V]Už'6c[ chU""
- "K \Yb'X]X'mci 'fYU`]nY'h\Uh'mci 'k Ubh'hc'ghi Xm'UVfcUX3"
- "K\Yb'=k UgʻghUfh]b['a mʻZci fh\'mYUfʻcZ'i b]j Yfg]hmžʻUfci bX'&\$%, ž'=\UX'h\Y cddcfhi b]hmʻhcʻUhhYbX'Uʻghi XmʻUVfcUX'ZU]fž'=gUk 'U```h\Y'cddcfhi b]h]YgʻUbX'VYbYZ]hg h\Uhʻh\]gʻ\UgžʻgcʻUhʻh\Uhʻh\and Y'=gYh'U'[cU``hcʻghi XmʻUʻa UghYf gʻXY[fYY'UVfcUX'''

- K \m'X]X'mci 'XYW]XY'hc'ghi Xm']b'Fi gg]U3'
- "6m'h\Y'h]a Y'=k Ug'Z]b]g\]b[ 'a mi bXYf[ fUXi UhY'XY[ fYYž'U'ZUa ]`m'UWei U]bhUbW\"k Ug'd`Ubb]b[ 'hc ``YUj Y'h\Y'Wci bhfmž'gc \Y'hc`X'i g'h\Uh'\]g'XYgh]bUh]cb'k Ug'Fi gg]Už
  U'Wci bhfm'UVci h'k \]W\"=X]X'bch'\Uj Y'a i W\"]bZcfa Uh]cbž'gc'=hcc\_'h\Y'hUg\_
  cZ'fYgYUfW\]b[ 'UbX'=Zci bX'U'`ch'cZ'dcg]h]j Y'h\]b[ gž'h\YfYZcfY'=XYW]XYX'hc'i bXYfhU\_Y
  a m'ghi Xm'cZ'Fi gg]Ub'UbX'Udd`m'Zcf'U'gW\c`Ufg\]dž'k \]W\"=k cbž'h\i g'\Uj ]b[ 'h\Y'Z] ``
  cddcfhi b]hm'hc'[ c'hc'Fi gg]U"'
- "K \YfY'X]X'mci 'Z]bX']bZcfa Uh]cb'UVci h'Fi gg]Ub'i b]j Yfg]h]Yg3'K \m'X]X mci 'XYW]XY'hc'Udd`m'hc'Dc`mhYW3"
- "H\Y'a U]b'd`UW'k\YfY'=Zci bX']bZcfa Uh]cb'k Ug'h\Y'k YVg]hY'Ghi Xm+bFi gg]Už k\YfY'=k Ug'UV`Y'hc'Z]bX'U'`ch'UVci h'Wcghgžei U`]hmž'dfc[fUa gž'Zfca 'h\Yb'cb'h\Y'fYgh cZ'h\Y']bZcfa Uh]cb'k Ug'Zci bX'X]fYWh`m'cb'h\Y'i b]j Yfg]hm'k YVg]hYg": cf'Yl Ua d`Yž =Zci bX'U'`ch'cZ']bZcfa Uh]cb'cb'h\Y'GDVDI 'k YVg]hY'U`cb['k]h\']hg'gcW]U`a YX]Už'h\YfY k Ug'U``\_]bXg'cZ']bZcfa Uh]cbž'Zfca 'h\Y'dfc[fUa g'Uj U]`UV`Yž'hc'h\Y'YI dYf]YbWY cZ'ghi Xm]b['Uh'Dc`mhYW\"=XYW]XYX'hc'W\cgy'h\]g'i b]j Yfg]hm'VYWUi gY'cZ'h\Y'UZZ]b]hm cZ']hg'a UghYf g'XY[fYYg'k]h\'a m'ghi Xm'cV'YWh]j Yž'Ug'k Y``Ug'h\Y'dcgg]V]`]hm cZ'ghi Xm]b[']b'9b[`]g\']b'YfbUh]cbU`'dfc[fUa g"'
- "K Ug']h'X]ZZ]W' `h'hc 'XYW]XY'hc 'ghi Xm']b 'U'bYk 'Wci bhfm3'8c 'mci 'fYa Ya VYf
  mci f'Z]fgh']a dfYgg]cbg'k \Yb'mci 'Uff]j YX'hc 'Fi gg]U3'
- $\label{lem:bchifyu``mž`Ug`=`\UX`VYYb`h\]b_]b[``UVci h`]h`Zcf`a Ubm`mYUfgž`]h`k Ug`ei ]hY Ub`Yb^cmUV`Y`dfcWYgg"`H\Y`Z]fgh`W]hm`=`WUa Y`hc`]b`Fi gg]U`k Ug`A cgWck ž`=k Ug`hchU``m ]a dfYggYX`Vm`]hg`]bZfUghfi Whi fY`UbX`\ck `a Ugg]j Y`]h`]g"`=\Uj Y`cb`m`j Yfm`[ ccX ]a dfYgg]cbg`cZ'h\Y`W]hm"`H\Yb`k \Yb`=Uff]j YX`]b`Gh"`DYhYfgVi f[ ž`=k Ug`Ua UnYX`Vm`]hg UfW\]hYWhi fYž`Wi `hi fY`UbX`h\Y`Ufh`dfYgYbhYj Yfmk \YfY"`$
- '< ck 'X]X'mci [ Yh'i gYX'hc ``]j Y']b'U'bYk 'Wci bhfm3'</pre>

- "H\Y'Z]fgh'X]ZZ]W'`h]Yg'=YbWci bhYfYX'k YfY'h\Y'`Ub[i U[Y'UbX'']j]b['k]h\
  a m'fcca a UhY"'5`h\ci [\'=\UX'U`fYUXm'ghi X]YX'Fi gg]Ubž']h'k Ug'Ub'cb`]bY'dfcWyggž
  gc'k\Yb'=Uff]j YX']b'h\Y'Wci bhfm']h'k Ug'gca Yh\]b['Wca d`YhY`m'X]ZZYfYbhž'Vi h
  Vm'hU\_]b[']h'i d'U[U]b'UbX'k]h\'h\Y'\Y`d'cZ'a m'bYk'Zf]YbXg'UbX'WUgga UhYg'=k Ug
  UXUdh]b['UbX'[Yhh]b['U'VYhhYf'Yj Y``cZ'h\Y'`Ub[i U[Y"'5g'Zcf'a m'fcca a UhYž'Uh'h\Y
  VY[]bb]b['=X]Xb h'\Uj Y'cbYž'Vi h']h'k Ug'gca Yh\]b['h\Uh'k cff]YX'a Yž'hc'\_bck
  ]Z'\Y'k Ug'[c]b['hc'\_bck'9b[`]g\'cf'Fi gg]Ubž'cf'a UmVY'GdUb]g\z'k ci `X'k Y'\Uj Y'[ccX
  Wca a i b]WUh]cb3'H\YgY'k YfY'h\]b[g'h\Uh'[Uj Y'a Y'i bWYfhU]bhmž'Vi h']b'h\Y'YbX'k \Yb
  \Y'Uff]j YXž'VY]b['UV'Y'hc'hU`\_'hc'\]a 'UVci h'U``h\]g']b'h\Y'Z]fgh'XUmg'UbX'cf[Ub]nY'h\Y

 $hUg_g^*]b^*hY^*fcca^*YX^*ig^*hc^*UjY^*U^*[fYUh^*WcYl]ghYbWYz^*bck^*kY^*UfY^*[fYUh^*Zf]YbXg^*YbUg_g^*$ 

- "K YfY 'h\ YfY 'Ubm'h\ ]b [ g 'k \ ]W\ 'gYYa YX 'ghfUb [ Y 'Zcf'mci ']b 'F i gg]U3 Cf 'qca Yh\ ]b [ 'h\ Uh'qi fdf]qYX 'mci 3'
- · · · = k Ugʻgi fdf]gYXʻVmʻh\Yʻk ]XYʻUj Ybi Ygžʻh\Yʻ`Uf[ Yʻg]XYk U`\_gžʻUbXʻh\Yʻdi V`]WgdUWYž k \]WX`U`gcʻgi fdf]gYgʻUbXʻd`YUgYgʻa Y"·
- $^{\prime\prime}$  < ck  $^{\prime\prime}$ X]X  $^{\prime\prime}$ mci f  $^{\prime\prime}$ ghi XYbh g  $^{\prime\prime}$ ]ZY  $^{\prime\prime}$ Uh Dc  $^{\prime\prime}$ mhY WX  $^{\prime\prime}$ VY [ ]b 3  $^{\prime\prime}$
- = ghufhYX'a m'ghi X]Yg'Uh'Dc`mhYWX'cb`]bYž'Vi h']h'k Ug'U``'j Yfm'[ccXž'bc'a UhhYf'h\Uh]h'k Ug'X]ghUbWY'`YUfb]b[ž']h'k Ug']bWi g]j Y'UbX'h\YfY'k Ug'U'j Yfm'b]WY'WcbbYWh]cb"'
- K \ Uh'UfY'mci f'd`Ubg'Zcf'h\ Y'Zi hi fY3'
- "A mig\cfh!hYfa id`Ubg'UfY'hc'Z]b]g\\ a mia UghYf g'XY[ fYY'UbX'hc'VY'UV`Y'hc'ghUfh k cf\_]b[ Y]h\Yf']b'Fi gg]U'cf']b'a m'Wci bhfm"
- "K\Uh'Xc'mci i gi U``m'Xc']b'mci f'ZfYY'h]a Y3'8c'mci '\Uj Y'Ubm'ZUj cf]hYd`UW'g']b'Gh"'DYhYfgVi f[ 3'5fY'h\YfY'Ubm'd`UW'g']b'Gh"'DYhYfgVi f[ 'mci XfYWca a YbX'Yj YfmcbY'hc'j ]g]h3'
- "Bcfa U``m'=gdYbX'a m'ZfYY'h]a Y'k U`\_]b[ 'Ufci bX'Xck bhck b'UbX'gYY]b[ 'bYk d`UWYg'U```cj Yf'Gh"'DYhYfgVi f[ ž'Vi h'a m'ZUj cf]hY'd`UWY']g'h\Y'W]hm'WYbhYf"'5'd`UWY'= `cj Y'UbX'k \]W\"]g'WcgY'hc'Gh"'DYhYfgVi f[ ']g'Di g\\_]bz'=`cj Y'h\Y'dU`UWYz'h\Y'dUf\_