FYg]XYbhgʻcZʻ5WfYU[YʻUfYʻjc]W]b[`h\Y]fʻWcbWYfbgʻUVcihʻh\Y dchYbh]U``]adUWhgʻcZʻh\YʻWcaaYfW]U``XYjY`cdaYbh''=bWfYUgYX hfUZZ]WZckž`cb[Yf`YaYf[YbWmfYgdcbgYʻh]aYgžUbX`h\Y`f]g\_`cZ [fcibXkUhYf`WcbhUa]bUh]cb`UfY`Uhʻh\Y`ZcfYZfcbh`cZ`dfchYghg''H\Y ghUh]gh]WgʻgdYU\_jc`iaYg.`:]fY`FYgWiY`ZYUfg`fYgdcbgY`h]aYgʻWci`X YIdUbX`hc`bYUf`m`%&`a]bihYgʻ]Zʻh\Y`[UgʻghUh]cb`]gʻWcbghfiWhYX"

# 7ca a i b]hm<sup>·</sup>7cbWfbg

7 ci bhm'Wca a ]gg]cbYfg'UfY'YI dYWhYX'hc'UWh'cb'h\Y'dfcdcgU``]b `UhY'5i [i ghž'Vi h'cddcg]h]cb'\Ug'VYYb'a ci bh]b["'5g'DU`a '6YUW\ Dcgh'fYdcfhgž'h\Y'dUfWY``]g'W'ffYbh`m'XYg][bUhYX'Zcf'fYg]XYbh]U` i gYž'UbX'h\Y'd`Ub'hc'fYncbY']h'Zcf'Wca a YfW]U`'di fdcgYg'\Ug fU]gYX'Z'U[g'Ua cb['`cWU`'d`UbbYfg"'H\Ym'Uf[iY'h\Uh'h\Y'dfc'YWh WcbZ]Whg'k]h\'h\Y'5WfYU[Y'BY][\Vcf\ccX'D`Ubž'k \]W\'U]a g'hc dfYgYfjY'h\Y'Wca a i b]hmg'X]gh]bWhž'ei ]Yh``]ZYghm`Y"

5 WfYU[Yž::`cf]XUž'I G5 '!`H\Y'ei]Yh'Wca a i b]hm'cZ'5WfYU[Yž :`cf]XUž']g'gh]ff]b[`k]h\'ghfcb[`gYbh]a Ybhg'Ug'fYg]XYbhg'fU``m U[U]bgh'U'dfcdcgYX'Wca a YfW]U`'dfc YWh'h\Uh'h\fYUhYbg'h\Y]f'gYa]! fi fU``W\UfUWhYf"`H\Y'K Ygh'9bX'7fcgg]b[`dfc YWhž'k \]W\'U]a g'hc XYj Y`cd'U'%&!di a d`[Ug'ghUh]cbž'Wcbj Yb]YbWY'ghcfYž'WJf'k Ug\ž fYghUi fUbhž'UbX'fYhU]``Vi]`X]b[`cb'U') "-!UWfY'dUfWY`ž'\Ug'VYYb a Yh'k]h\'Z]YfWY'cddcg]h]cb'Zfca ``cWU``ghU\_Y\c`XYfgž']bWi X]b[`h\Y 5WfYU[Y'@UbXck bYfg'5ggcW]Uh]cb'f5@5Ł'UbX'bi a Yfci g'fYg]XYbhg"

DU`a `6YUW\`7ci bhm`ZUWYg`Wca a i b]hm`di g\VUW\_`U[U]bgh`h\Y dfcdcgYX`K Ygh`9bX`7fcgg]b[`Wca a YfW]U``XYj Y`cda Ybhž gdUf\_]b[`ncb]b[`XYVUhYg"

### FYg]XYbhg'FU``m'hc'<U`h'7cbhfcjYfg]U`'; Ug GhUh]cb'Dfc'YWh']b'5WfYU[Y

# =a dUWhcZNcb]b[ '@Uk g

@cWU``ZYYXVUW\_`\Ug`d`UmYX`U`g][b]Z]WUbh`fc`Y`]b`g\Ud]b[`h\Y XYjY`cdaYbhg`dfcdcgU`ž`U`dc]bh`Yad\Ug]nYX`Vm`h\Y`XYjY`cdYfg Wcaa]haYbh`hc`fYj]g]b[`h\Y]f`d`Ubg`VYZcfY`h\Y`bYI h`Wcibhm Wcaa]gg]cbYfg`aYYh]b["`MYhž`XYgd]hY`h\YgY`UX´ighaYbhgž`aUbm fYg]XYbhg`fYaU]b`ghUibW\`m`cddcgYX`hc`h\Y`dfc´YWhž`]bg]gh]b[`h\Uh h\Y]f`Wcaaib]hmg`gYa]!fifU``YggYbWY`aigh`fYaU]b`]bhUWh"

#### ei Yf]Yg"

Cb'h\Y'Z]d'g]XY'cZ'h\Y'Uf[iaYbhžXYjY`cdYfg'Zfca'6fcW\_ 8YjY`cdaYbh'7cfdcfUh]cb'Uf[iY'h\Uh'h\Y'dfcYWh'k]``dfcj]XY YggYbh]U``gYfj]WYg'h\Uh'h\Y'5WfYU[Y'Wcaaib]hm'bYYXg"'8if]b['U fYWYbh'aYYh]b['Uh'h\Y'=bX]Ub'HfU]``=adfcjYaYbh'8]ghf]Wh'Vi]`X]b[ž dfcYWh'd`UbbYf'UbX``UbXgWUdY'UfW\]hYWh'8cbU`Xgcb'<YUf]b[ dfYgYbhYX'U'WcbWYdh']bhYbXYX'hc'V`YbX'\Ufacb]cig`m`]bhc'h\Y YI]gh]b['Wcaaib]hm'ghfiWhifY'''H\Y'XYjY`cdaYbhž'gdUbb]b[ UfcibX'%\*ž\$\$\$`geiUfY'ZYYhž'UbX'ZYUhif]b['U'Xf]jY!h\fci[\ fYghUifUbhž'\Ug'VYYb'acX]Z]YX'hc']bWiXY'bc]gY!a]h][Uh]cb aYUgifYg'UbX'Yb\UbWYX``UbXgWUd]b[']b'fYgdcbgY'hc'Wcaaib]hm

# 8YjY`cdYfg'DYfgdYWh]jY

### Ua cb[ 'fYg]XYbhg"

fUX]ig"AUbm`cWU`gž`]bWiX]b[`5@5`dfYg]XYbh`6cV`Acf[UbžUf[iY h\Uh`h\]g`cjYfXYjY`cdaYbh`h\fYUhYbg`bch`cb`m`h\Y]f bY][\Vcf\ccXg`]XYbh]hm`Vih`dchYbh]U``m`gYhg`U`XUb[Yfcig dfYWYXYbh`Zcf`ch\Yf`Wcaaib]hm`d`Ubg`]b`DU`a`6YUW\`7cibhm" H\Y`Wcaaib]hm`]g`bch`U[U]bgh`XYjY`cdaYbhž`Vih`]h`]g`U[U]bgh ibgi]hUV`Y`XYjY`cdaYbh`Zcf`cif`U[f]W'`hifU``UbX`YeiYghf]Ub `UbXgWUdYž`Acf[Ub`ghUhYXž`fYZYWh]b[`U`k]XYgdfYUX`gYbh]aYbh

H\]g`]g`U`hfciV`]b[`dfcgdYWh'Zcf`U`Wcaaib]hm`h\Uh`fY`]Yg`\YUj]`m cb``cWU``kY``g`Zcf`Xf]b\_]b[`kUhYfž`k]h\`cjYf`-\$i`cZ`fYg]XYbhg XYdYbX]b[`cb`h\Ya"

H Y 5 @5 V g [b]h]UhY X U d Y h]h]c b U]a b[ hc ghc d h Y d fc Y Whž W]h]b[

 $h = \frac{1}{2} + \frac{1}{2} +$ 

H\Y`WUg\`cjYf`h\Y`K Ygh`9bX`7fcgg]b[`\][\`][\hg`h\Y`Wf]h]WU``fc`Y cZ`ncb]b[``Uk g`]b`h\Y`XYjY`cda Ybh`dfcWYgg"`I bXYfghUbX]b[`h\Y `cWU``ncb]b[`WUhY[cf]Yg`]g`j]hU``Zcf`XYhYfa]b]b[`k\Uh`hmdY`cZ XYjY`cda Ybhg`WUb`VY`di fgiYX`UbX`\ck`h\Ym`a Um`]a dUWh Wca a i b]h]Yg"`5g`YId`U]bYX`Vm`<mark>5Ufcb`<U``ž</mark>`ncb]b[`fY[i`Uh]cbg X]WhUhY`dYfa]gg]V`Y``UbX`i gYgž`XYbg]hmž`UbX`XYjY`cda Ybh ghUbXUfXgž`k\]WX`WUb`[fYUh`m`UZZYWh`U`bY][\Vcf\ccXg`WXUfUWhYf UbX`ZibWh]cbU`]hm"

H\Y'Z hi fY'cZ'h\Y'5WfYU[Y'a][\h'\]b[Y'cb'h\]g'XYjY'cdaYbh XYW]g]cb"'K]h\'dUgg]cbUhY'fYg]XYbhg'cb'cbY'g]XY'UbX'UaV]jU`Ybh XYjY'cdYfg'cb'h\Y'ch\Yfž'h\]g'cb[c]b['gU[U'k]```i bXciVhYX`m g\UdY'h\Y'W\UfUWhYf'cZ'5WfYU[Y'Zcf'[YbYfUh]cbg'hc'WcaY"' + g'U XY`]WUhY'VU`UbW]b['UWh'h\Uh'k]```fYei]fY``]ghYb]b[ž'Wcadfca]gYž UbX'U'ghfcb['Wcaa]haYbh'hc'dfYgYfj]b['k\Uh'aU\_Yg'h\]g Wcaaib]hm'gdYW]U`"

8YhU]`g	
Cfh	5WfYU[Yž:`cf]XUžIG5
EiY``Yb	• k k k "dU`a VYUWNdcgh"Wca
	• k k k "k dhj "Wca
	• UUfcb∖U <sup>™</sup> Wca

### 6Ygi WXYb'G]Y'i bg'Ui Z.'a Y]b!k ]Yb"bYh