G_m`<][\`; gh]WY.'/ [\$' - /7\cddYf 7cdg/ [\$' - /`GcUfg`k]h\`GYUgcb`Hk c @Ui bW\`

H\Y`gYWcbX`gYUgcb`cZ' ei ch/7\cddYf`7cdgž/ ei ch/`ZcWig]b[cb`A Uf]cb`7ci bhm/ \$' - /g`G\Yf]ZZg`CZZ]Wf`\Y`]WcdhYf cdYfUh]cbgž`dfYa]YfYX`≯bY`%+`cb`DUfUa ci bhŽ "



C WU`Už`A Uf]cb`7cibhmžil b]hYX`GhUhYg`!`H\Y`g_]Yg`cjYf`A Uf]cb 7cibhm`\UjY`ibjY]`YX`h\Y]f`gYWfYhg`cbWY`U[U]b"`Cb`\$DY`%+ž &\$&)ž`h\Y`gYWcbX`gYUgcb`cZ`h\Y`h\f]``]b[`gYf]Yg`7\cddYf`7cdg a UXY`]hg`[fUbX`XYVih`cb`DUfUa cibhŽ "`H\]g`a iW\!Ubh]W]dUhYX Zc``ck!id`hc``Ugh`mYUfg`dcdi`Uf`Z]fgh`gYUgcb`]bhfcXiWYg`j]YkYfg hc`h\Y`XUf]b[`cdYfUh]cbg`cZ`h\Y`A Uf]cb`7cibhm`G\Yf]ZZg`CZZ]WY fA 7GCE'UbX`]hg`5]f!%`\Y`]WcdhYf`hYUa "`5```hYb`Yd]gcXYg`cZ`h\]g bYk`gYUgcb`kYfY`fY`YUgYX`g]a i`hUbYcig`mž`]bj]h]b[`ZUbg`hc`V]b[Y! kUhW\`h\Y`UWh]cb`Zfca`ghUfh`hc`Z]b]g\"`CWU`U`BYkg`fYdcfhg`h\Uh h\Y`gYf]Yg`g\ckWUgYg`h\Y`VfYUh\hU_]b[`UbX`cZhYb`\][\!ghU_Yg]bghUbWYg`k\YfY`UYf]U``]bhYfjYbh]cb`d`Umg`U`Wf]h]WU``fc`Y`]b``Uk

A cfY h\Ub > gh 9bhYfhU]ba Ybh

dfchYWh'h\Y'Wcaaib]hm"

H\Y`WUdUV]`]h]Yg`cZ`h\YgY`XfcbYg`U`gc`YI hYbX`VYmcbX`'i gh dc`]W]b["'H\Ymdfcj]XY'WfiW]U`'qiddcfh'Xif]b['qYUfW\'UbX'fYqW'Y cdYfUh]cbgži h]`]n]b['h\Yfa U``]a U[]b['hYW\bc`c[m'hc``cWUhY a]qq]b[']bX]j]Xi U`q'Yj Yb`i bXYf'W\U``Yb[]b['WcbX]h]cbgžgi W\'Uq Uh'b][\h'cf']b'fci [\'hYffU]b"'H\YgY']bbcj Uh]cbg'fYdfYgYbh'U a cXYfb UddfcUWX hc di V]WgUZYhmž YI Ya d]Zm]b[\ ck ``Uk YbZcfWYa Ybh']q'Yj c`j]b['k]h\ h\Y h]a Yq hc VYhhYf qYfj Y UbX

HUffUbh7cibhmkYVg]hY"

5g'XYd]WhYX']b' 7\cddYf'7cdgž 'h\Y']bhY[fUh]cb'cZ'hYW\bc`c[m']b `Uk 'YbZcfWYa Ybh'cdYfUh]cbg']q'dUfUa ci bh"'HU_Yž'Zcf']bghUbWYž h\Y`dfUWh]WYg`cZ`h\Y`HUffUbh`7cibhm`G\Yf]ZZg`CZZ]WY`5j]Uh]cb`Ib]hž $k \setminus W^{-1}g^{-1}b^{-1}$ Uʻj Uf]Yhm`cZ`XfcbYg`Yei]ddYX`k]h\`\][\!XYZ]b]h]cb`WUa YfUg`UbX h\Yfa U``]a U[]b['hc'a cb]hcf'UfYUg'Wca dfY\Ybg]j Y`m"'7ci d`YX k]h\`h\Y`UWh]cbg`g\ckb`]b` 7\cddYf`7cdgž`]hg`WYUf`h\Uh`XfcbYg U``ck 'Zcf'fYU`!h]a Y'hfUW_]b['cZ'gi gdYWhg'UbX'Ugg]gh']b'Yj]XYbWY Wc YWh c b z'U K | Y Y d b [hc a h] UhY f g g hc XY d h Y g c b h Y[fcibX"K]h h YUV]hm hc Zm Uh X]ZZY fY bh U h]hi XY gž h Y gY UXjUbWYX'hcc`g'WcjYf``Uf[Y'UfYUg'YZZ]W]Ybh`mž'dfcj]b['h\Y]f'kcfh\]b`\][\!dfYqqi fY`q]hi Uh]cbg``]_Y`Wf]a Y`qWYbYg`UbX`\cqhU[Y gW/bUf]cg"'Mci 'WUb'`YUfb'a cfY'UVci h'h\Y]f'cdYfUh]cbg'cb'h\Y'

H\Y`Fc`Y`cZHYW\bc`c[m]b`@Uk '9bZcfWYa Ybh

Yb[U[YX"

7\cddYf⁻7cdg⁻\Ug⁻WUdhⁱ fYX⁻h\Y⁻\YUfhg⁻cZ⁻a Ubmž⁻cZZYf⁻b[⁻U k]bXck']bhc'\ck'\Y`]WcdhYfg'UbX'UYf]U``hcc`g'UfY'i h]`]nYX'hc UddfY\YbX`gi gdYWhg`UWfcgg`CWU`U`UbX`h\Y`gi ffci bX]b[`A Uf]cb 7ci bhm" H\Y`gYf]Yg`dfcXi WX`Vm`GYY`=h`Bck `Ghi X]cgž'HYI Ug`7fYk DfcXiWh]cbgžUbX`J%`DfcXiWh]cbg`Yad\Ug]nYg`fYU`!`]ZY`]bW]XYbhg]bj c`j]b['j][]`Ubh``Uk 'YbZcfWYa Ybh'YZZcfhg"'K]h\ 'U'hchU``cZ'&\$ Yd]gcXYg`bck `Uj U]`UV`Yž'j]Yk Yfg`\Uj Y`d`Ybhm`hc`_YYd`h\Ya

K \]`Y` 7\cddYf'7cdg `cZZYfg`h\f]``]b[`YbhYfhU]ba Ybhž']h'U`gc \][\`][\hg`gYf]ci g`hcd]Wg`k]h\]b'Wca a i b]hm`gUZYhm`UbX`Wf]a Y dfYj Ybh]cb"`H\Y`UYf]U``ghfUhY[]Yg`dcfhfUmYX`]b`h\Y`gYf]Yg fYgcbUhY`k]h\`fYU`!`]ZY`dfUWh]WYgž']bX]WUh]b[`h\Uh`h\YfY g`U`[fYUh XYU``a cfY`hc`h\Y`g\ck`h\Ub`f gh`gi gdYbgY"`5g`]``i ghfUhYX`Vm`h\Y HUffUbh'7ci bhm`5j]Uh]cb`I b]h g`dfchcWc`gž'h\]g`i h]`]nUh]cb`cZ a cXYfb`hYW\bc`c[m`Ybgi fYg`Vch\`YZZYWh]j YbYgg`UbX`gUZYhm`Zcf cZZ]WYfg`k \]`Y`Yb\UbW]b[`h\Y]f`UV]`]hm`hc`fYgdcbX`hc`Ya Yf[YbW]Yg gk]Zh`m"

H\Y`]bhYfgYWh]cb`cZYbhYfhU]baYbh'UbX`fYU`]hm`XYd]WhYX`]b 7\cddYf`7cdg`gdYU_g`hc`h\Y`WfYUh]j]hm`cZ`ghcfmhY``]b[`k]h\]b h\Y`fYU`a`cZ``Uk`YbZcfWYaYbh"`5g`]h'Wcbh]biYg`hc`g\ckWUgY`\ck \Y`]WcdhYfg`UfY`igYX`Zcf`diV`]WgUZYhmž'j]YkYfg`WUb``cc_`VYmcbX h\Y`UWh]cb`hc`UddfYW]UhY`h\Y`ibXYf`m]b[`aYggU[Y.`]bbcjUh]cb`]b dc`]W]b[`]g`j]hU``Zcf`Vi]`X]b[`gUZYf`Wcaaib]h]Yg"`8]jY`]bhc`h\Y YIW]hYaYbh'UbX`]bhYbg]hm`cZ`h\Y`bYk`gYUgcb`UbX`YIdYf]YbWY h\YgY`fYU`!`]ZY`\Yfc]Wg`Z]fgh\UbX`h\fci[\`h\Y`Ybg`cZ`UYf]U```Uk YbZcfWYaYbh"

:cf`acfY`XYhU]`g`UbX`VY\]bX!h\Y!g\\bYg`]bg][\hžij]g]h`h\Y`g\ckg dU[Y`cb`=A8V"

8YhU]`g	
Cfh	CWU`UžAUf]cb'7cibhmžib]hYXGhUhYg
EiY``Yb	● k k k "c WU`U!bYk g"Wca
	• a "]a XV"Wca
	 k k k "hUffUbhWcibhmhl"[cj

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