

**D5** \*\* **& %** \* : **F** D5 \*\* : F

9CG; a V<! 9`YWfc Cdh]WU`GmghYa g

### DfcXiWhiHYIhg

### DfcXi WhiHYI hg

DfcXi WhilbZcfa Uhlcb

 $D5^*\&\&\%: F^*]g^*U^*dc^*mUa_]XY^*\&^*Zcf^*dfcW^*gg]b[^!]b^*Yf]b[^*gmghYa_g^*k_]hh^*U^*VU^*c[Yb^*ZfYY^*z^*W,Ya_]WU^*ZUa_Y^*fYhUfXUbh"^=bWgY^*cZ^*ZfY^*U^*WbfVcbUh]b[^*WcUh]b[^*Uf]gYg^*cb^*h_Y^*gi_fZUWY^*cZ^*h_Y^*dUfhz^*]gc^*Uh]b[^*h_Y^*d^*Ugh]WVY^*ck^*"$ 

# DfcdYfh]Yg

i ZfYY cZ\Uc[Ybg

i \\[ \Yf^gh]ZZbYgg^Wca dUfYX^hc^i bZ]\YX^D5^\%

### 5WW/dhUbW/W/jhYf]U

i '>5F'&) 'fUj ]Uh]cbŁ

i | @-( fl9`YWMf]WU`/ 9`YWMfcb]WgŁ

#### Hmd]WU`Udd`]WUh]cbg

¡ 'Uj ]Uh]cb fY"[ "'U]f Xi WgŁ

; 'd`Ugh]WdUfhg`]b`XYj ]Wrg`UbX`Udd`]UbWrg`fY"[ "'9/ 9'\ci g]b[gŁ

| ' 8 <sup>.</sup> 8UHJ  | Xfm# WcbX                           | l b]h              | HYgh GhUb XUf X                    |
|--|-------------------------------------|--------------------|------------------------------------|
| H\Y`dfcdYfh]Yg`cZdUfhg`a Ubi ZUWWi fYX`i g]b[`UXX]h]j Y`a Ubi ZUWWi f]b[`hYVV.bc`c[mfH'"[" |                                     |                    |                                    |
| Xi Y'hc'h\Y]f``UmYf!Vml`UmYf'dfcXi Wh]cbž'hc'gca Y'YI hYbh'X]fYWh]cb'XYdYbXYbh''H\]g`\Ug   | 'hc'VY'WcbgJXYfYX'k\Yb'XYg          | J[b]b['h\Y'dUfh'Uk | oX`XYZJbJb[`h\Y`Vi]`X`cfJYbhUhJcb" |
| HYbg]`Y`A cXi `i g   |                                     |                    | =GC `) &+! %#! &                   |
| L'8]fYVM]cb  | &) \$\$ <sup>*</sup> #*&(\$\$       | A DU               |                                    |
| M8]fYWn]cb   | &) \$\$ <sup>*</sup> #*&(\$\$       | A DU               |                                    |
| N'8]fYVMjcb  | &' \$\$`#`&&\$\$                    | A DU               |                                    |
| HYbg]`Y`GhfYb[ h\  |                                     |                    | =GC ') &+! %#! &                   |
| L 8 ]fYVM]cb   | ( * ·# ·( '                         | A DU               |                                    |
| M8]fYW1]cb   | ( * <sup>·</sup> # <sup>·</sup> ( ' | A DU               |                                    |
| N <sup>.</sup> 8]fYV <b>h</b> ]cb  | (%'#'',                             | A DU               |                                    |
| GhfU]b 'Uh'HYbg]'Y 'GhfYb[ h\  |                                     |                    | =GC ') &+! %#! &                   |
| L 8]fYVM]cb  | <b>(</b> '# '*                      | 1                  |                                    |
| M8]fYWn]cb   | ( '# '*                             | 1                  |                                    |
| N <sup>.</sup> 8]fYV <b>h</b> ]cb  | ' ·*# · <b>(</b>                    | 1                  |                                    |
| GhfU]b 'Uh'VfYU_   |                                     |                    | =GC ') &+! %#! &                   |
| L'8]fYVM]cb  | <b>(</b> '# '+                      | 1                  |                                    |
| M8]fYWh]cb   | ( '# '+                             | 1                  |                                    |
| N'8]fYWh]cb  | ' ·*# · <b>(</b>                    | 1                  |                                    |
| : `YI i fU``A cXi `i g`f&' š7ž'L `8]fYWh]cbŁ   | &' \$\$`#`!                         | A DU               | =GC '%+,                           |
| : `YI i fU``GhfYb[ h\ fL 8]fYWh]cbŁ  | * ) `# '!                           | A DU               | =GC <sup>·</sup> %+,               |

| H\Yfa U`dfcdYfh]Yg                   | Xfm# WcbX  | l b]h | HYgh GhUb XUf X            |
|--------------------------------------|------------|-------|----------------------------|
| AY`h]b[ 'hYa dYfUhi fY'fl&\$š7#a ]bŁ | %, ) '# 'ł | š7    | =GC '%%' ) +! %#! '        |
| : `Ua a UV]`] <b>m</b>               |            |       | 7G'&) '#'>5F&) '#': 5F     |
|                                      |            |       | &) 'Ÿ'&)!, )'              |
| HYgh'd UggYXž'‱g' =[ b]h]cb 'H]a Y   | %"+        | аа    |                            |
| HYgh'dUggYXž'‰g'=[b]h]cb'H]a Y       | &"\$       | аа    |                            |
| Ga c_Y`8Ybg]lm                       |            |       | 568 '\$\$' %'f⊨ggi Y. : Łž |
|                                      |            |       | a Yh\cX. 5 <del>∃H</del> A |
|                                      |            |       | &"\$\$\$+                  |
| HY gh'd UggYX                        | %"+        | аа    |                            |
| HYgh'd UggYX                         | &"\$       | аа    |                            |
| Hcl ]V]hm                            |            |       | 568 '\$\$' %'f⊨ggi Y. : Łž |
|                                      |            |       | a Yh\cX. 5≟HA              |
|                                      |            |       | ' "\$\$\$)                 |
| HYgh`d UggYX                         | %"+        | a a   |                            |
| HY gh' d UggYX                       | &"\$       | аа    |                            |

@Ugh`W\Ub[Y. `&\$%' !%%|\$+`Gci f\W\. `k k k "a UhYf]U`XUhU\W\bhYf"\\cappaca

DU[ Y. '%#8

$$\label{eq:hambers} \begin{split} H\Dot{Y}.XUhU`WeffYgdebX`hc`cif'\_bck`YX[Y`UbX'YI dYf]YbW`Uhih\Y`h]a Y`cZdi V`]Wuh]eb"`H\YmXe`beheb'h\Y]f`ck b`fYdfYgYbh`Ugj ZZj\JYbh`Ugjg`Zef`UbmdUfhXYg][bz`bY]h\Yf`Xe h\Ymdfcj\XY`UbmU[fYYa Ybh`Uvci hcf'[i UfUbhY'h\Y`gdYwJZ]WafcaYfh]Yg`cZU`dfcXi Whcf`dUfhcf'h\Y`gj\JmzZf`U`dfcXi Whcf`dUfhZef`U gdYwJZJWudd`JWuh]eb"`=h`Jg`h\Y fYgdebg]Y]\mcZf\Y`dfcXi Whcf`dUfhcf'h\Y`gdYgJWj\JmzZf`U`dfh\Y`gf`U`gdVJJ\mnZf`U`dfh\YgfYg`Ug`k\Y``Ug`l]gy`gj\JUV]\mnZef`U`ddfh\Y`Uf'di fdcgY"`H\\]g`U`g`Udd]Yg`fY[UfX]b['h\Y`Webg]XYfUh]eb cZdcgg]Y\Y`]bhY``YWi U`dfcdYfmf][\hg Ug k Y``Ug`Uk g`UbX`fY[i 'Uh]ebg"`H\Y`XUhU`UfY`gi V'YWh`b`W\Ub{Y`k}]h\ci hbch\W'`Ug`dUfhcz 9CGfiWebh]bi ci g XYj Y`cda Ybh'UbX ]a dfcj Ya Ybh'dfcWfggYg"$$

| D5 '&&%\$ | : | F |
|-----------|---|---|
| D5‰*: F   |   |   |

# 9CG; a V< '! '9`YWfc'Cdh]WU`GmghYa g

| 6i fb]b[ 'VY\Uj ]cf  |       |     | l @ - ( |
|----------------------|-------|-----|---------|
| HYgh'd UggYXž' < 6   | %"%   | аа  |         |
| HYgh d UggYXž < 6    | %"&   | a a |         |
| HYgh d UggYXž < 6    | %"'   | a a |         |
| HYgh'd UggYXž' < 6   | %"(   | аа  |         |
| HYgh d UggYXž < 6    | ' "\$ | a a |         |
| HYgh'd UggYXž'J!\$   | &"\$  | a a |         |
| HYgh d UggYXž J!\$   | &"(   | аа  |         |
| HYghˈd UggYXžˈJ ! \$ | ' "&  | аа  |         |
| HYgh d UggYXž J!\$   | ( "\$ | аа  |         |

| Ch\Yf`dfcdYfh]Yg                           | Xfm# WcbX   | l b]h | HYgh GhUb XUf X |
|--|-------------|-------|-----------------|
| 8 Ybg]hmflUgYfg]bhYfYXŁ                    | %\$* \$`#`! | _[ #a | 9CG A Yh\cX     |
| Dck XYf Wc`ci f fluw hc guzyhm Xuhu g\YYhz | K \ ]hY     | ļ.    | !               |
| 7c`ci f`cZ'h\Y`Wca dcbYbhg                 | K \ ]hY     | ļ.    | ļ.              |

# 7\UfUWhYf]gh]Wg

# DfcW/gg]b[

'8 'Df]bh]b[ž'5XX]h]j Y'A Ubi ZUWMi f]b[ž'@UgYf'G]bhYf]b[ž'FUd]X Dfchchmd]b[

### 8 Y`]j Yfm'Zcfa

Dck XYf

### GdYW]/U``7\UfUWhYf]gh]Wg

: `Ua Y`fYhUfXUbh

#### : YUhi fYq

<][\'7fmghU``]b]hmž'H\Yfa U`'GhUV]`]hmž'<ca cdc`ma Yf</p>

### 7\Ya]WU`FYg]ghUbWY

; YbYfU``7\Ya ]\W``FYg]gh\Jb\W`ž`; fYUgY`FYg]gh\Jb\W`ž`C]` FYg]gh\Jb\W

### 5dd`]WUh]cbg

5]fWfUZh'UbX'5YfcgdUWfz'9'YWff]WU''UbX'9'YWffcb]WU'