

DYXY`YWFUbXU`]YfYf'j Yf`Yhnh'J YfZc`[Yf i bX'Z`ØW\hYh']b'CgbUVfØW_°

5a '&' "'A Àfn'_Ua 'Yg']b'CgbUVfØW_'ni 'nk Y]
J Yf_Y\fgi bZÀ``Ybž'VY]'XYbYb'DYXY`YW'i bX'9!GWcchYf!: U\fYf
ZØW\hYhYb"'NYi [Yb'[Ygi W\h"

@c hhYf'GhfU» Yž'(-\$+, 'C gb UV fØW_ž'8 Yi hgW\`Ub X'!'5a '&' "A Àfn'_Ua 'Yg'[Y[Yb'%(.&) 'I\f'Ui Z'XYf'@c hhYf'GhfU» Y']b C gb UV fØW_'ni 'Y]b Ya 'J Yf_Y\fgi b ZU``"'9]b'')!'À\f][Yf'A Ub b ž'XYf a]h'Y]b Ya 'DYXY`YWi b hYfk Y[g'k Ufž'Zi\f'Ui Z'Y]b'\U`hYb XYg'D_k Ui Z''6Y]'XYa '5i ZdfU``ghØfnhY'Yf'i b X'j Yf`YhnhY'g]W\'Y]W\h''5b VY]XYb': U\fnYi [Yb'Yb hghUb X'GUW\gW\UXYb"'B UW\'Y]bYf'j cf'Cfh YfZc`[hYb'a YX]n]b]gW\Yb'J Yfgcf[i b['`Y\bhY'XYf'A Ubb'Y]bY k Y]hYfY'6Y\Ub X`i b['UV'i b X'ZØW\hYhY'ni':i»'j cb'XYf'I bZU``ghY``Y"

NYi [Yb'XYg'JcfZU``g'jYfZc`[hYb'XYb': `ØW\h][Yb'ibX
VYcVUW\hYhYbž'k]Y'X]YgYf'Y]bYb'JYfgi W\ibhYfbU\a ž'Y]b': U\ffUX
]a '<]bhYf\cZ'Y]bYg'Ub[fYbnYbXYb'; YVÀi XYg'ni 'Ybhk YbXYb''
8]YgYf'JYfgi W\ik i fXY'YXcW\UV[YVfcW\Ybž'ibX'X]Y': `i W\h'XYg
')!-À\f][Yb'gYhnhY'g]W\i]b'F]W\hib['GhfU*Vif[Yf'D`Uhn'Zcfh''8cfh
_Ua 'Yg'ni 'Y]bYf'_OfdYf`]W\Yb'5i gY]bUbXYfgYhni b['nk]gW\Yb'XYa
: `ØW\h][Yb'ibX'gY]bYb'JYfZc`[Yfbž'kcVY]'Y]b'(,!'À\f][Yf'AUbb
Ui g'CgbUVfØW_'`Y]W\h'jYf'Yhnh'ki fXY'''Ni XYa 'jYfgi W\hY'XYf
: `ØW\h][Yž'nkY]'kY]hYfY'DYfgcbYb'_OfdYf`]W\'Ubni [fY]ZYb'i bX
VY`Y]X][hY'Y]bY'kY]hYfY'DYfgcbž']bXYa 'Yf'g]Y'UbqdY]hY''

 $Dc^{nY}ba = h \cdot \partial W h [Yb]b ; Yk U fgUa$

8]Y'Dc`]nY]'_cbbhY'XYb'6YgWki`X][hYb'gWk`]Y»`]Wk']b'XYf FccbghfU»Y'ghY``Yb'i bX']b'; Yk U\fgUa 'bY\a Yb"'9g'k]fX j Yfa i hYhž'XUgg'XYf'')!À\f][Y'i bhYf'XYa '9]bZi gg'VYfUi gWkYbXYf A]hhY``ghUbX"'6Yj cf`Yf`]b`Y]bY`?`]b]_`[YVfUW\h`k i fXYž'k i fXY`Y]bY 6`i hYbhbU\a Y`VY]`]\a `Xi fW\[Y\ZØ\fhž'k]Y`< UgYdcgh`VYf]W\hYhY"

9]b k Y]hYfYf J cfZU``ž'XYf Y]b À\b`]WX Yg A i ghYf Ui Zk Y]ghž YfY][b YhY g]WX 'Ua '8]YbghU[j cfa]hhU['i a '%%.') 'I \f']b 'XYf'; c`XghfU» Y '9W_Y H\YcXcf!; YggbYf!GhfU» Yž'YVYbZU``g']b 'C gbUVfØW_"'8cfh`_Ua 'Yg'ni Y]bYf'?c``]g]cb 'nk]gWX Yb 'Y]bYf'' (! 'À\f][Yb 'F UXZU\fYf]b 'i bX 'Y]bYa i bVY_UbbhYb '9!GWcchYf!: U\fYf" 8]Y 'F UXZU\fYf]b 'k c``hY 'bUWX fYWX hg']b 'X]Y'; c`XghfU» Y 'Y]bV]Y[Ybž'k À\fYbX'XYf'9!GWcchYf!: U\fYf``]b_ggY]h][']b 'F]WX hi b['?fYi nghfU» Y 'Zi \f" 8]Y 'F UXZU\fYf]b ghØfnhY 'i bX'j Yf`YhnhY'g]WX '`Y]WX hV'XYf'9!GWcchYf!: U\fYf YbhgWXi `X][hY'g]WX '`_i fn'i bX'YbhZYfbhY'g]WX 'UbgWX`]Y» YbX'j ca I bZU``cfh"

 $8]Y`Dc`]nY]`6YfgYbVfØW_`gi W\h`NYi [Yb`ibX`V]hhYhia `<]bk Y]gY`ni XYa `ZØW\h][Yb`9!GWcchYf!: U\fYf"8]YgYf`k i fXY`U`g`a Åbb`]W\ž Yhk U`%+$`V]g`%+) `Wa `[fc» ž`]b`Xi b_`Yf`?`Y]Xi b[`ibX`a]h`Xi b_`Yb < UUfYb`VYgW\f]YVYb"`K Y]hYfY`<math>\pm$ bZcfa Uh]cbYb`XUni `g]bX`VY]` B UW\f]W\hYb`< Yi hY`j YfZØ[VUf"

8 YhU]`g	
J c f ZU``	? OfdYfj Yf`Yhni b[žJYf_Y\fgi bZU``
I fgUWX Y	6YfUigWXYbXY^A]hhY`ž'IbZU``
Cfh	@chhYf'GhfU»Yž'(-\$+, 'CgbUVfØW_ž
	8 Yi hgWX`UbX
J Y f`Y hnhY	&
: YghbU\a Yb	%
EiY``Yb	• k k k "\UgYdcgh"XY
	• k k k "bUWX f]WX hYb!\Yi hY"bYh

6 Ygi WX Yb 'G]Y i bg Ui Z 'b!U["XY