

>U_cV'=b[YVf][hgYb'j YfdUggh'DcX]i a . VYffUgWXi b['VY]'C`ma d]U']b'DUf]g

J_cV' = [YVf][hgYb'YbhhÀi gW\h'a]h'D`Uhn'j]Yf'ØVYf'%")\$\$`a
VY]'C`mad]U'&\$&(ž'kÀ\fYbX'; UVf]Y``Y'H\caUg'; c`X']a'&\$\$
a!@UiZ'g]W\Yfh"

C`ma d]gW\Y'Gd]Y`Y']b'DUf]g.'9]b i bYfk UfhYhYf'5i g[Ub['ZØf'=b[YVf][hgYb

8 Ug i b Y fk UfhY hY :]b U`Y 'ØV Y f '%") \$\$ A Y hY f

 $\label{thm:local-sum} $$\exists \underline{W}_gcb^< < \underline{W}_Yf^*Ui \ g^*XYb^*I \ G5^*gYhnhY^*a \]h^*gY]bYf^*NY]h^*j \ cb^*' .&+z^*')$$ A]bi hYb^*Y]bYb^*bYi Yb^*C^*ma \ d]gWXYb^*FY_cfX^*]b^*X]YgYf^*8]gn]d^*]b^*i bX [Yk Ubb^*X]Y^*; \ c^*Xa YXU]^*Y''8Yf^Vf]h]gWXY^*K Y^*ha Y]ghYf^*&gV^?Yff YffY]WX hY^*XYb^*nk Y]hYb^*D^*Uhnz^*[YZc^*[h^*j]cb^*MUfYX^*Bi[i gYz^*YVYb^*ZU^*gUi g^*XYb^*I G5z^*XYf^*XYb^*Xf]hhYb^*D^*Uhn^*VY^Y[hY'': Øf^*\blue[YVf][hgYb^*k Uf X]Yg^*Y]b^*VYf^*F ØW_gWX^*U[z^*bUWX^*XYa Yf^*VY]^*XYb^*j cfVYf][Yb K YhhVYk YfVYb^*k UVfY^*< OWX gh^*Y]ghi b[Yb^*nY][hY''' $$$

; UVf]Y``Y`H\ca Ug`[`Àbnh'ØVYf'&\$\$`A YhYf

 $= ? cbhfUgh'XUni ghfU\ hY; UVf]Y``Y'H\ ca Ugž'X]Y'I G!5h\ `Yh]bž']b XYf': fUi Yb!&$$!A YhYf!8]gn]d`]b"'A]h']\ fYf'VYY]bXfi W_YbXYb'NY]h j cb'&%ž, ''GY_i bXYb'g]W\ YfhY'g]Y'g]W\ X]Y'; c`Xa YXU]``Y'i bX VYghÀh][hY']\ fYb'GhUhi g'U`g'HcdZUj cf]h]b"'<math>\Rightarrow$ `]Yb'5`ZfYX x X]Y G]Y[Yf]b'XYg'%\$\$!A YhYf!@Ui Zg x Zc`[hY']\ f'a]h'Y]bYf'ghUf_Yb @Y]ghi b[']b'&& x \$, 'GY_i bXYb'i bX'g]W\ YfhY'g]W\ X]Y'G]`VYfa YXU]``Y" 8]YgYf'K YW\gY`nk]gW\ Yb'9bhhÀi gW\ i b['i bX'Hf]i a d\Yb'gdf]W\ h XUZØf x k]Y'j]Y`gY]h]['i bX'i bj cf\YfgY\VUf'X]Y'C`ma d]gW\ Yb'Gd]Y`Y g]bX"

8]Y 6YXYi hi b['ZØf'X]Y 5h\ `YhYb'i bX'X]Y ; Ya Y]bgW\ UZh

 $8]Y'K YhhVYk YfVY']b'DUf]g'g]bX'b]Wk h'bi f'ZØf'X]Y'Gdcfh'Yf'j cb \\ [fc*Yf'6YXYi hi b[/'g]Y'\UVYb'Ui Wk'Y]bYb'h]YZYb'9]bZi gg'Ui Z'X]Y; Ya Y]bgWk UZhYbž'Ui g'XYbYb'X]YgY'5h\`YhYb'ghUa a Yb'''8]Y \\ 9fZc`[Y'i bX'A]ggYfZc`[Y'XYf'5h\`YhYb']bgd]f]YfYb''i b[Y A YbgWkYbž']\fYb''HfÀi a Yb'bUWk ni 'U[Yb'i bX'g]Wk'gdcfh']Wk'ni VYhÀh][Yb'''6YgcbXYfg']b'Bcfk Y[Yb'_ObbhY'=b[YVf][hgYbg <math>F @W_gWk'U[X]Y'8]g_i gg]cb'i a XYYJcfVYfY]hi b['''i b[Yf'HU`YbhY]a''@Y]Wk'hUh\`Yh]_VYfY]Wk'UbfY[Yb''$

9]bXfØW_Y XYf Ni gW Ui Yf i bX : Ubg

8]Y 5ha cgd\àfY 'VY] 'XYb 'K Yhh_àa dZYb ']gh'Y `Y_hf]g]YfYbX"

HUi gYbXY 'j cb 'A YbgW\Yb 'ghfÒa Yb ']b 'X]Y 'GhUX]Ybž'i a ']\fY

: Uj cf]hYb 'ni 'i bhYfghØhnYb 'i bX '[Ya Y]bgUa '9a ch]cbYb 'ni 'hY]`Yb"

♣b[YVf][hgYbg'F ØW_ghUbX '_ÒbbhY ']b 'XYf'² ZZYbh`]W_Y]h'8 YVUhhYb

ØVYf'X]Y 'A YbhU`]hÀh'i bX 'XYb '8 fi W_ž'XYa '5h\`YhYb'Ui g[YgYhnh

g]bXž'\Yfj cffi ZYb"'8]Y '5h\`YhYb'ghY\Yb'b]W\h'bi f']a 'F Ua dYb`]W\h'z

g]Y 'hfU[Yb'Ui W\'X]Y '< c ZZbi b[Yb'j]Y`Yf': Ubg'Ui Z']\fYb'GW\i `hYfb"

8]Y'C`ma d]gW\Yb'Gd]Y`Y'k YfXYb'k Y]hYf\]b'Y]b'GW\Ui ZYbghYf'ZØf gdcfh`]W\Y'9I nY``Ybn'i bX'a YbgW\`]W\Yb'9\f[Y]n'gY]bž'i bX'Yg V`Y]Vh'UVni k UfhYbž'k]Y'\displayb'i bX'UbXYfY'Gdcfh`Yf'Ui g X]YgYb'9fZU\fi b[Yb'`YfbYb'k YfXYb"'\displayfY'; YgW\]W\hYb'g]bX'b]W\h bi f'; YgW\]W\hYb'XYg'K YhhVYk YfVgž'gcbXYfb'Ui W\'j cb

9bhgW\`cggYb\Y]h'i bX'XYf'i bUi Z\Òf`]W\Yb'Gi W\Y'bUW\ JYfVYggYfi b["

8 YhU]`g

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