## 7\]bYgY'Hcif]gh/ $_{,}$ \$' - /g'5]fdcfh'HUbhfia ; cYg'J]fU`'5ZhYf'6U['FiW\_ig'

5.7\]bYgY'hcif]gh/, \$'-/g'j]fU``U]fdcfh'hUbhfia 'Uh'A]`Ub A U`dYbgU'fYjYU`g'hYbg]cbg'cjYf'VU[[U[Y'fi`Yg'UZhYf'\Yf cjYfg]nYX'WUffmlcb'kUg'fYYWhYX"



A ]`Ub A U`dYbgU'5]fdcfhž'A ]`Ubž:=hU`m'! Cb'\* bY', ž'&\$&) ž'U gWbY'i bZc`XYX'Uh'A ]`Ub A U`dYbgU'5]fdcfh'h\Uh'a Ubm'hfUj Y`Yfg WUb cb`m']a U[]bY mYh'gca Y'a Um'\Uj Y'Yj Yb'`]j YX'h\fci [\']h"'5 7\]bYgY'hci f]ghž'WYUf`mcj Yfk\Y`a YXž'Yfi dhYX']bhc'U'di V`]W X]gd`Um'h\Uh'\Ug'g]bW'[cbY'j]fU`"'H\Y'Ybh]fY'Yd]gcXY'k Ug WUdhi fYX'cb'j]XYcž'k]h\'j]Yk Yfg'Ufci bX'h\Y'k cf`X'hi b]b[']b'hc k]hbYgg'k\Uh'WUb'cb`m'VY'XYgWf]VYX'Ug'Ub'U]fdcfh'hUbhfi a 'cZ'Yd]W dfcdcfh]cbg"'H\Y'k ca Ub g'Zfi ghfUh]cb'ghYa a YX'Zfca 'U'g]a d`Y fi 'Y.'\Yf'WUffmlcb'VU['k Ug'XYYa YX'hcc'\YUj mž'UbX']bghYUX'cZ UX'j gh]b[']h'cf'ZUW]b['U'ZYYž'\Yf'fYUWh]cb'gd]fU'YX'ci h'cZ'Wcbhfc`"

FYdcfhg'Zfca '=bhYfbUh]cbU`'6i g]bYgg'H]a Yg'fYj YU`'h\Uh'g\Y Wci `X'VY'qYYb'qWfYUa ]b[ž'Wfm]b[ž'UbX'fc``]b['cb'h\Y'[fci bXž a i W\ hc h\ Y X]gVY`]YZcZ'ZY``ck 'dUggYb[ Yfg"'9mYk]hbYggYg
fYdcfhYX'h\ Uhrg\ Y 'k U]`YX'UhrU]fdcfh'ghUZZ'k \c'dc`]hY`m'Ug\_YX'\Yf
hc 'WU`a 'Xck bž'cb`m'hc'\ Uj Y'\ Yf'hUbhfi a 'YgWU`UhY"'I `h]a UhY`mž
U]fdcfh'Ui h\ cf]h]Yg'a UXY'h\ Y'XYW]g]cb'hc'fYa cj Y'\ Yf'Zfca 'h\ Y
Z][\h'UbX'Ug\_YX'\ Yf'hc'fYVcc\_'cbW'g\ Y'gcfhYX'ci h'\ Yf'VU[[U[Yg]hi Uh]cb"'H\ Y'UZhYfa Uh\ '\ Ug'][b]hYX'U'Zi ffm'cZ'X]gW'gg]cbg
cb`]bYž'k]h\ 'a Ubm'Wf]h]W]n]b['\Yf'VY\Uj ]cf'UbX'WU``]b['Zcf'ghf]WhYf

## ; $c]b[U]fU^{3}.5GcW]U^{3}AYX]U^{3}GYbgUh]cb$

H\Y'j ]fU'j ]XYc'cZh\Y']bWJXYbh'\Ug'[ UfbYfYX'\i bXfYXg'cZh\cigUbXg'cZj ]Yk gžXfUk ]b[ 'Yj Yfmh\]b[ 'Zfca '`Ui [ \hYf'hc gma dUh\m''7ca a Ybhg'cb'gcW]U`a YX]U'fYZYWh'U'a ]I 'cZ'X]gVY`]YZUbX'gi ddcfhžk ]h\'gca Y'gi [ [ Ygh]b[ 'h\Uh'h\Y'k ca Ub g'fYUWh]cb']gU'gma dhca 'cZ'h\Y'\Y][ \hYbYX'ghfYgg'UbX'dfYggi fYg'cZ'a cXYfbhfUj Y`"'+n g'U'gdYWhUWY'h\Uh g'\UfX'hc'`cc\_'Uk Um'Zfca ž'UbX'k \]'Ya Ubm'YI dfYggYX'X]gUddc]bha Ybh'Uh'\Yf'UWh]cbgž'ch\Yfg'UfY'i g]b[h\]g'a ca Ybh'hc'dc]bh'ci h'h\Y'VfcUXYf']ggi Yg'fY`UhYX'hc'U]f`]bY

₺ hY fY gh]b [`mž h\ Y 'Wc bj Y fgUh]c b 'gi ffc i b X]b [ 'h\ ]g']b W]X Y b h'h]Y g']b hc
U'k ]X Y f' X Y V UhY 'UV ci h'\ ck 'U] f`]b Y g'Y b Zc f WY 'WU ffm!c b 'f Y ghf] Wh]c b g"

₺ gh fY WY b h'mž U'd UggY b [ Y f' c b 'U'Z] [\ h'Z fca '5 h`Ub hU 'g\ UfY X '\ Y f
]ff]hUh]c b 'c b 'F Y X X]h 'UV ci h'h\ Y ']b Wc b g]ghY b W]Y g' c Z' V U[ [ U[ Y
dc`] W]Y g" '5 b 'U] f' hfUj Y`Y f' b c hY X 'h\ Uh'k \]`Y 'g\ Y 'k Ug' c b`m'U``ck Y X 'hc
hU\_Y 'c b Y'd Y fgc b U``] hY a 'c b 'V c UfX ž'g\ Y 'c V g Y fj Y X 'Ub c h\ Y f
d UggY b [ Y f'k ]h\ 'hk c 'g] n UV 'Y 'fc``` V U[ g'hU\_]b [ ``] V Y fh]Y g'k ]h\ 'h\ Y
c j Y f\ Y U X 'V] b 'fi `Y g ž'U```k \]`Y 'U'Z] [\ h 'UhhY b X Ub h'ghc c X '] X`m'V m'
Gi WX 'Y I d Y f] Y b WY g'\] [\`][\ h'h\ Y 'Wc b Zi g] c b 'Ub X 'Z fi ghfUh]c b 'h\ Uh
a Ub m'hfUj Y`Y fg 'Z Y Y``k \ Y b 'Wc b Z fc b hY X 'k ]h\ 'g Y Y a ]b [`m'UfV] hfU fm
Y b Z c f W a Y b h'c Z' fi 'Y g"

## 6U[[U[Y'Dc`]W]Yg. 5 8 ]gW gg]cb K cfh\ < Uj ]b[

 $\label{eq:hamalor} H\Y`X]gdUf]hm`]b`VU[\[U[\Y`YbZcfWYa\Ybh`\Ug`gdUf\_YX`X]gW'gg]cbg$ 

bchicb`micb`]bY'Vi hik ]h\]b'h\Y'hfUj Y``Wca a i b]hmiUg'k Y``"

5\\chicb`micb`]bY'Vi hik ]h\]b'h\Y'hfUj Y``Wca a i b]hmiUg'k Y``"

5\\chicb[hc': cl'BYk gž'dUggYb[Yfg'ZfYei Ybh`mik Y][\']b'cb
d`UhZcfa g'`]\_Y'FYXX]hihc'g\UfY'h\Y]f'ck b'a ]gUXj Ybhi fYg'k]h\
\chicb[U[Y'dc`]W]Yg"'H\Y'fYW'ff]b['h\Ya Y'gYYa g'hc'VY'U'WU``'Zcf
U]f`]bYg'hc'Y]h\Yf'ghf]\\h`m'UX\YfY'hc'h\Y]f'fi `Yg'cf'\\cap a d`YhY`m
fYh\]b\_'h\Ya "'5\ZhYf'U``\z'k]h\'hfUj Y``VY\\cap a]b[']b\\fYUg]b[`m
ghfYgg\Zi `z'cbY'k ci `X'h\]b\_'i b]\Zcfa 'Yb\Zcf\\alpha Ybh'k ci `X'\f]b['U
`]hh`Y'dYU\\cap cZ'a]bX'hc'dUggYb[Yfg'Yj Yfmk\YfY"

H\Y'[UhY']bW]XYbh'Uh'A]`Ub']g'a cfY'h\Ub''A gh'Ubch\Yf'j]fU`
a ca Ybh']h g'U'fYa]bXYf'cZ'\ck 'fi `Yg'WUb']a dUWh'ci f'hfUj Y`
YI dYf]YbWYg"'=h'U`gc'Vf]b[g'hc'`][\h'h\Y'Ya ch]cbU`'i bXYfW' ffYbhg
h\Uh'cZhYb'UWWca dUbm'U]f'hfUj Y`"'Gcž'h\Y'bYI h'h]a Y'mci fY
dUW\_]b['mci f'VU['Zcf'U'Z][\hž'mci 'a][\h'k Ubh'hc'Wcbg]XYf'bch''A gh
h\Y'k Y][\hž'Vi h'h\Y'dchYbh]U`'Zcf'U'ghfcb['Ya ch]cbU`'fYUWh]cb
g\ci `X'mci 'Z]bX'mci fgY`Z'ZUW]b['Ub'i bYI dYWhYX'g\U\_Y!i d'Uh'h\Y
U]fdcfh"

I`h]a UhY`mž'k \]`Y`h\YfY gʻgca Yh\]b['hc'VY`gU]X`Zcf'h\Y`hfUj Y`YI dYf]YbWYž']h gʻYggYbh]U``hc'\_YYd'U'Wcc``\YUX`k\Yb']h'Wca Ygʻhc VU[[U[Y"'5ZhYf'U``ž'Ugʻa Ubm`gYUgcbYX`Z`mYfg`k]```hY```mci ž'U WU`a Yf'UddfcUW\'a Um''\ gh`gUj Y`mci 'Zfca 'VY]b['h\Y'bYI h'j]fU` qhUf'Uh'h\Y`U]fdcfh"

8 YhU]`g	
Cfh	A]`Ub'AU`dYbgU'5]fdcfhž'A]`Ubž'=hU`m
EiY``Yb	• k k k "]Vh]a Yg"Wc"i _
	• k k k "bYk g"Wca "Ui
	• kkk"ZcIbYkg"Wca

6 Ygi W Yb G | Y i bg Ui Z a Y | b ! k | Yb "b Yh