

## ?fY]gdc\_U`!: ]bU`Y`&\$&). `DUW\_YbXY`8i Y``Y Ua `A ]hhY`f\Y]b`ghY\Yb`VYj cf°

5a '&&"' i b]'&\$&) '\_Aa dZYb'8Yi hn'\$) 'i bX'k Y]hYfY'HYUa g']b XYb'?fY]gdc\_U`Z]bU`g'XYg': JA'i a 'XYb'H]hY`']b'?Ò`b'i bX 6cbb"



8 Yi hnž'8 Yi hgWX `Ub X '! '8 Yf' &&" '\$ b] '&\$ &) 'k ]fX 'Y]b 'VYXYi hYbXYf HU[ 'ZØf'X]Y : i » VU``ZUbg 'Ua 'A ]hhY`f\Y]bž'XYbb 'XUbb 'YbXYb'X]Y ?fY]gdc\_U`k YhhVYk YfVY'a ]h'Y]bYf'FY]\Y'j cb'dUW\_YbXYb : ]bU`gd]Y`Yb"'K ]Y'X]Y :: J A 'VYf]WX hYhž'Z]bXYb'X]Y :: ]bU`gd]Y`Y']b'XYb bYi b'?fY]gdc\_U`!K YhhVYk YfVYb'gck c\``VY]'XYb' < YffYb'U`g'Ui WX VY]'XYb': fUi Yb'ghUhh"'8]Y'J cfZfYi XY'XYf': Ubg']gh'VYfY]hg'gdØfVUfž i bX'X]Y'HYUa g'ghY\Yb'VYfY]hž'g]WX'Ui Z'XYa 'D`Uhn'ni 'VYk Y]gYb"

a ': i » VU``\_fY]g'? Ò`b'\_ca a h'Yg'VY]'XYb'< YffYb'ni a

5i ZY]bUbXYfhfYZZYb'XYg'G7'6K'? Ò`b'[Y[Yb'8Yi hn'\$) "'5bdZ]ZZ']gh
i a '%).'\$'l \f']a 'GJ'; fYa VYf[!<i a Vc`Xh'\*\$#\*&'Y"J"': Øf'X]Y
: fUi Yb']gh'XUg'[ 'Y]WXY'8i Y``'nk ]gWXYb'J]\_hcf]U'? Ò`b'i bX'8Yi hn'\$)
VYfY]hg'i a '%'.\$\$'l \f'Ub[YgYhnh"'6Y]XY'Gd]Y`Y'j YfgdfYWXYb</pre>

## $8]Y k Y]hYfYb : ]bU`dUfh]Yb ]a VYfV`]W_$

5VYf'Ui W. ]b'XYb'UbXYfYb': i » VU``\_fY]gYb'[]Vh'Yg'j]Y`'ni 'gY\Yb" =a ': i » VU``\_fY]g'6cbb'gd]Y`h'GGJ'6cfb\Y]a '[Y[Yb'GJ'Jcf[YV]f[Y" 8 Ug'Gd]Y``ghUfhYh'i a '%).\$\$'I\f']a 'GdcfhdUf\_'DYbbYZY`Xž'k À\fYbXX]Y'8 Ua Yb'j cb'Fch!KY]» 'A Yf`'i bX'HJ'F\Y]bXcfZ'VYfY]hg'i a %&.\$\$'I\f'Ui Zg': Y`X'[Y\Yb"

## Dc\_U`k YhhVYk YfV'U`g'Gdfi b[VfYhh

8 Yf '6]hVi f[ Yf!?fY]gdc\_U` '&\$&(#&) '\Uh'ni XYa 'Y]bY'k ]W\h][ Y'Fc` 'Y U`g'Ei U`]Z]\_Uh]cb' ZØf' XYb' 6]hVi f[ Yf! Dc\_U` 'Ui Z'J YfVUbXgYVYbY &\$&) #&\* "'Dfc'?fY]g'ei U`]Z]n]YfYb'g]W\'j ]Yf'A UbbgW\UZhYb' ZØf' XYb a cX]Z]n]YfhYb' Dc\_U` 'a ]h'\* ('HYUa g" '8]Y' VYghYb' HYUa g'\UVYb'U`gc X]Y'; Y`Y[ Yb\Y]hZ'g]W\'Y]bYb' D`Uhn']b' XYf'bÀW\ghYb'Fi bXY'ni g]W\Yfb"'9]b'gdUbbYbXYf'K YhhVYk YfVZ'VY]'XYa 'YXYf'G]Y['nÀ\`h'

 $\label{eq:Gd_Y^n_a_bound} $\operatorname{Gd}Y^n_a = \operatorname{Dc_U^n_ObbYb^n} A h^nk Y^n_A U^n_A h^nk Y^n_A h^nk Y^n_$ 

9[U``cV`G]Y`Y]b`Y]b[YZY]gW\hYf`: Ub`g]bX`cXYf`Y]bZUW\`bi f`XUg
; YgW\Y\Yb'j YfZc`[Yb'k c``Yb` `XYf`: ]bU`hU[`Ua `&&"'\\* b]`k ]fX`a ]h
G]W\Yf\Y]h'j ]Y`Y`a ]hfY]» YbXY`A ca YbhY``]YZYfb"'8]Y`J cfZfYi XY`]gh
ni a `; fY]ZYb'bU\ži bX`k Yf`k Y]» ž'j ]Y``Y]W\h'gY\Yb`k ]f`Ui W\`X]Y
Y]bY`cXYf`UbXYfY`, VYffUgW\i b[°

: Øf'k Y]hYfY' ±bZcfa Uh]cbYb'ni 'XYb'j YfgWX]YXYbYb

Dc\_U`k YhhVYk YfVYb'i bX'U\_hi Y``Yb'9bhk]W\_`i b[Yb'VYgi WXYb'G]Y

Ui WX'X]Y'GY]hY'j cb'?]W\_Yf"

8 Y hU]`g	
Cfh	8 Yihnž8 YihgWX`UbX
EiY``Yb	• k k k "Zj a "XY
	• VYf[ "Zj a "XY
	• k k k "_] <u>W_</u> Yf"XY

6Ygi WXYb G]Y ii bg Ui Z a Y]b!\_cY`b bYh