

# BY[Ī V]cg 9!A UJ`



9!A UJ`!`=bfccXi Ā;c

5`Ya ;c

G\`f`[ Y\`f\`f` < Yff`DfĀg]XYbž

A i ]rc`Zcfa U`žc`XYg]bU\`c`hYa`i`a`hĕi`c`YgdV\U`ei`Y`XYj`Y`g\`f`i`g\Xc`bc`i`[`Uf`Xc`g\i`df]a`Y]f`c`bca`Y

H\W\W\

J 1/2YbU`dUbY`dfYn]XYbHŽ

G\`f`[ Y\`f\`f` < Yffž

: cfa U`žXYg]bU\`c`Xc`g\i`c`a`UgW`]bcžbca`Y`XYg\`b\`V\Xc

J 1/2YbU`dUbYž

G\`f`[ Y\`f\`f` : fU`ž

: cfa U`žXYg]bU\`c`Xc`g\i`c`ZYa`]b]bcžbca`Y`XYg\`b\`V\Xc

J 1/2Yb1/2dUbĚ

G\`f`[ Y\`f\`f` 8 La Yb`i`bX` < YffYbž

: cfa U`žXYg]bU\`c`XY`bca`Y`Y`[`A\`Yf`c`XYg\`b\`V\Xc`g

J 1/2YbU`dUbY`#J 1/2Yb1/2dUbĚ

G\`f`[ Y\`f\`f` 8 La Yb`i`bX` < YffYbž

: cfa U`žYbXYfYĀ\Xc`U`X]j`Yfg\`g`d`Yggc\`g`i`U`i`a`X`YdUf\`a`Yb\`c

8cVfU`XYbž

G\`f`[ Y\`f\`f` 8 La Yb`i`bX` < YffYbž

: cfa U`žbca`Y`Y`[`A\`Yf`c`Xc`XYg]bU\`c`XYg\`b\`V\Xc`g

J Ya`nU]bHfYg`j`Ub\`a`g`f`Ub`1/2`ž

G\`f`[ Y\`f\`f` < Yff`G\Wa`]Xž

: cfa U`žXYg]bU\`c`Xc`g\i`c`a`UgW`]bcžbca`Y`V\`b\`V\Xc

J 1/2YbU`dUbY`Ga`]Hž

G\`f`[ Y\`f\`f` : fU`G\Wa`]Xž

: cfa U`žXYg]bU\`c`Xc`g\i`c`ZYa`]b]bcžW\`g\`U\`ž`bca`Y`V\`b\`V\Xc

J 1/2Yb1/2dUbĚGa`]H`cj`1/2

G\`f`[ Y\`f\`f` : fU`G\Wa`]Xž

: cfa U`žXYg]bU\`c`Xc`g\i`c`ZYa`]b]bcžg`c`h`f\`U\`ž`bca`Y`V\`b\`V\Xc

J 1/2Yb1/2g`Yébc`Ga`]H`cj`1/2

G\`f`[ Y\`f\`f` : fU`G\Wa`]Xž

: cfa U`žXYg]bU\`c`Xc`g\i`c`ZYa`]b]bcžbca`Y`V\`b\`V\Xc`ž`Yg\`U\`c`V\j`j`XYg\`b\`V\Xc

J 1/2Yb1/2dUbĚGa`]H`cj`1/2

@]Y\Yf` < Yff`G\Wa`]Xž

A`Ybcg`Zcfa`U`žc`fYa`Y\`b\`h`Y`1/2`fYU`nci`bY[Ī V]cg`V\`a`c`XYg]bU\`c`U`b\`h`f`cfa`Yb\`Y

A`]U`>c\`bY`Ga`]Hž

@]Y\Yf`>c\`Ubbž

=bZcfa`U`žc`fYa`Y\`b\`h`Y`Ā`Ua`][`c`d`Yggc`U`Xc`XYg]bU\`c`ž`fY`U`h`j`Ua`Yb\`h`]bV\`a`i`a

A`]U`>c\`bYž

K ]f'gWfY]Vyb' ðbYb'VnQ[ `]W''''  
: cfa UžYgWYj YbXc'Ya 'bca Y'XY'hcXU'UYa dfYgU

C VFUMĚa Y'gY'buJ 1/2c\`YXb÷''''

K ]f'gWfY]Vyb' ðbYb']b'Ni gUa a Yb\Ub[ 'a ]h''''  
: cfa UžYgWYj YbXc'Ya 'bca Y'XY'hcXU'UYa dfYgU

DÉ Ya Yj 1/a j Y'gdc`]hcg]`g''''

6Yni [ 'bY\ a YbX'U Z''''

J 'b1/2Urbcg]`bU''''

: cfa UžYgWYj YbXc'UfYgdY]hc'XY'U[ c'ei Yj cWĚ1/2j ]i 'gcVfY'UYa dfYgU'ei Y'Ygh1/2WzbhU'UbXc

ð'6Yni [ 'U Z''''

J 'b1/2Urbcg]`bU''''

: cfa UžYgWYj YbXc'UfYgdY]hc'XY'U[ c'ei Yj cWĚ1/2j ]i 'gcVfY'UYa dfYgU'ei Y'Ygh1/2WzbhU'UbXc

ðW'gWfY]VY' ðbYb'zi a 'a ]W'`bUW' ''''ni  
Yf\_] bX][ Yb''''

DÉ ]j 1/a žUVnW'j 1/2]bZcfa cj U'c''''

A Ybcg'Zcfa UžYgWYj YbXc'Ya 'gYi 'bca YžfYdfYgYb'UbXc'UYa dfYgU

ðW'gWfY]VY' ðbYb']a 'B Ua Yb'j cb''''

DÉ ]J 1/a 'a ĀbYa ''''

: cfa UžYgWYj YbXc'Ya 'bca Y'XY'ci hfU'dYggcU

ðf'i bhYfbY\ a Yb'k i fXY'a ]f'j cb''''g\A  
Ya dZc\`Yb''''

J U Y'gdc`Yébcghia ]VniUXcdcfi éYbU''''

: cfa Uža UbY]fUdc`]XU'XY]bfcXi Āžc

## 9!A Uj` ! 7 cf dc`df]bV]dU

### 5`Ya žc

### HWWWĚ

K ØXY'Yg'G]Y' ðbYb'Yrk Ug'U ga UWYbžk Ybb''''  
F Yei Yf]a Ybrc`Zcfa UžhYb'U]j U

J UX]c'VmJ 1/a ž\_XnVn''''

K ĀfYb'G]Y'gc`ZYi bX']W''''

6mřUL'VngY'RU\_`Ug\_Uj fWz'U''''

F Yei Yf]a Ybrc`Zcfa UžhYb'U]j U

ðW'k ĀfY' ðbYb'g\A f'j YfVi bXYbžk Ybb''''

6m] VnWca 'J 1/a j Ya ]nUj 1/2]ž\_XnVn''''

F Yei Yf]a Ybrc`Zcfa UžhYb'U]j U

K ]f'k ØXYb'i bg'g\A f'ZYi Ybžk Ybb'G]Y'i bg  
U gZ\A f]WYfY' ðbZcfa U]cbYb'ØVf''''ni gYbXYb  
\_ĀbbhYb''

6m] VnWca j X÷ðbĚ\_XnVngY'b'1/a 'a c\`dcgUh  
dcXfcVb÷^ É]bZcfa UW'c''''

F Yei Yf]a Ybrc`Zcfa Uža i ]hc`dc`]Xc

ÀW`k ÁfY` ÌbYb`g\`f`XUb`\_Vufžk`Ybb`GjY`""  
\_ÖbbYb`""

6m`fUL`VnW`J` 1/2` j` X`÷`é`b`U`f`h`ž`\_`Xn`VngH`Y`a` c`\'`fUL`""

F`Yei`Yf]a`Ybrc`Zcfa`U`ža`i` ]`rc`dc`]Xc`

K` Ø`FXyb`GjY`a` ]f`Z`FYi` bX`]`WYfk`Y]gY`""ni` gYbXYb`""  
F`Yei`Yf]a`Ybrc`Zcfa`U`ždc`]Xc`

A`c`\'`fUL`VngH`Y`a` ]`dfc`g`f`a` `dcgUH`""

K` ]f`g]bX`XUfUb`]`bhYfYgg]Yfřž`""ni`  
Vn]Y\Yb`#`f\`U`H`b`""  
F`Yei`Yf]a`Ybrc`Zcfa`U`ždc`]Xc`

A` 1/2` Y`n`1/2`Ya` `c`n`f`g`\_`1`b`É`c`VXf` YbÉ`""

ÀW`a` Ö`W`H`Y`GjY`Z`U` ]`Ybž`cV`""  
F`Yei`Yf]a`Ybrc`Zcfa`U`ždc`]Xc`

A`i` g`f`a` ]` 1/2`g`dc` 1/2`X`U`ž`n`XU`""

?` Ö`bb`Yb`GjY`Y`""`Ya` d`Z`Y` `Yb`""  
F`Yei`Yf]a`Ybrc`Zcfa`U`žX]fYrc`

A`c`\'`fUL`VngH`Y`X`cdcfi` é]H`""

K` Ø`FXyb`GjY`a` ]f`Z`FYi` bX`]`WYfk`Y]gY` `ni` gYbXYb`""  
F`Yei`Yf]a`Ybrc`Zcfa`U`žX]fYrc`

A`c`\'`fUL`VngH`Y`a` ]`dfc`g`f`a` `dcgUH`""

GjY`k` YfXYb`Xf]b[ `]`W`g`h[ `Y`V`H`Y`b`""  
F`Yei`Yf]a`Ybrc`Zcfa`U`ža`i` ]`rc`X]fYrc`

BU`Á`U`j` ÷`J` 1/2`g` 1/2`1/2`a` Y`ž`U`VngH`Y`""

K` ]f`k` Á`f`Y`b` Ì`b`Y`b`X`U`b`\_`V`u`f`ž`k`Y`bb`""  
F`Yei`Yf]a`Ybrc`Zcfa`U`ždc`]Xc`ž`Ya` `bca`Y`X`U`Ya` dfYgU`

6m`]`Vn`W`ca` j` X`÷`é`b`É`\_`Xn`Vn`""

K` ]Y` `U` H`h` Ì`f`U`\_`h` Y` `Yf`@]`g`Y`b`dfY]`g`Z`Ø`""  
F`Yei`Yf]a`Ybrc`Zcfa`U` `Y`gd`Y`M`ž`]`W`ž`X]fYrc`

>U`\_`Ù` `Y`j` 1/2`U`\_`h` 1/2`b`É`W`b`É` `dfc`""

K` ]f`g]bX`U`b`""` ]`bhYfYgg]Yfři` bX`k` Ø`FXyb`[ `YfbY`  
k` ]ggYbž`""  
E`i` Y`g]`cb`U`a` Ybrc`Zcfa`U`žX]fYrc`

A` 1/2` Y`n`1/2`Ya` `c`""U`W`h`:]`Vn`W`ca` j` ÷`X`÷`H`""

K` ]f` \`U`W`Y`b` Ì`f`Y`f`K` Y`f`V`i` b[ `Y`b`h`bca` a` Y`b`ž`X`U`gg`GjY`Y`""  
\`Y`f`g`H`Y` `Yb`""  
E`i` Y`g]`cb`U`a` Ybrc`Zcfa`U`žX]fYrc`

Dc`W`cd`]`]^`ga` Y`n`]`bn`Y`f` 1/2` ž` Y`j` 1/2`dfc`Xi` \_`h`Y`""

K` ]f`V`Y`U`W`g]`W`h`[ `Yb`""  
8`Y`W`U`f`U`Ä`c`Zcfa`U` `X`Y`]`bh`Y`b`Ä`c`ž`X]fYrc`

BU`É`a` `n`1/2`a` ÷`f`Ya` `Y`ž`U`W`m`""

# BY[Ī V]cg 9!A Uj`



K Jf\UWb`≠f'5 b[ YVchgcfl ZĀ'h[ '[ Ydf0Zhi bX  
: cfa Užei Y`Yj UUi a UXWVg;c'fYZfYbH'Ui a 'bY[Ī V]c

DYÉ]j ÷`ga Y'nj ½]j] ½'b½f\ U'''

@Y]XYf'a QggYb'k Jf`≠bYb'a ]HŲ`YbžXUgg

>Yb½a `Érc'j ½g]bZcfa cj Už` Y'''

: cfa UžfY'Y]Ā;c'ci `XYa cbgflUĀ;c'XY'ZUHU'XY']bHfYggY'Ya 'i a UcZyffUci 'bY[Ī V]c

8Yf'5b\Ub[ `]gh]a ''''!': cfa UŲ

D Éc\U'Yj YZcfa ½Ā ''''

: cfa UžYgdYV]Z]WbXc Vž'a 'ei U`dfc[ fUa U'c'XYg]bUŲ]c'XYj Y'Umf]f'c'Ufei ]j c'UbYl c

≠W`UWY`≠fYb'5 b\Ub[ `Yi H'A cf[ Yb'b]WWh0ZbYb  
\_ČbbYb" A Y]b'J ]fYbgWbbYf`UhY]bYb'J ]fi g  
YbHXYW]H'

8bYgf½bc`gYa 'bYa c\ fUk'chYj ÉhXUbc' d Éc\i "A ^  
UbHj ]fcj Ūdfc[ fUa 'hc'XYH\_cj U`U\_cj ]fi g'

: cfa UžX]fYrcžYgdYV]Z]WbXc'i a 'dfcV'Ya U'Wž'a 'i a 'Ufei ]j c'UbYl c

6]HŲ`YbHqW'i `X][ Yb'G]Y'X]Y'j YfgdĀHŲH  
K Y]HŲ'Y]H' b[ `XYf'B UWf]W]hžUWYf'U Z[ fi bX'Y]bYg  
H]ddZ\`Yfgj\_Ua `≠fY'9!A Uj`'a ]hXYa '< ]bk Y]g  
"i bVY\_UbbHŲ'B i hŲf" Ub'a ]W'ni f0W]

Ca `ci j ½a 'gY'nU'hcž` Y`gYa 'bYd YdcgU'fUk'ndf½i 'X ě Yž  
UY\_j `]d Y\_`Ydi 'Vm'Y!a U]`j f'½Wb'U'crbUéYb'U\_c''' cX  
bYrb½a Ā'ci ' ]j UH'Y'''

: cfa Uždc`]Xc

K Y]HŲY'≠bZcfa U]cbYb`Yf\U'hb'G]Y'U Zi bgYfYf  
≠bHŲbYhgY]H'i bHŲf''''

Dfc'XU É]bZcfa UW'dfcgĀ`'bUj H] H'bu Y'k Wcj Ā  
gf½b\_mbU'UXfYgY'''

: cfa Už`Ubi bV]UbXc'gYi 'k YVg]HŲ

## 9!A Uj`! 8YgZ]Wc

### 5`Ya žc

: Ø'k Y]HŲY'5 i g\_0bZŲ'gY\Y]W'≠bYb'[ YfbY'ni f  
J YfZ0 i b["

: cfa Uža i ]rc'dc`]Xc

### HWWWž

Dc\_i X'Vi XYH'dch Wcj UhXU Édca cW]bYj ½Y'H'gY'bu  
a ÷'cVf½q]H'

6]HŲ`UggYb'G]Y'i bgk ]ggYbžZU`gk Jf`≠bYb'k Y]HŲ  
V\] Z]W'gY]b`\_ČbbYb"

>Ygh] Ya `Ya YVŪh'U\_\_c']j b½dca cW]ÉXY'H'b½  
dfcgĀ` j ÷X:H'

: cfa Uža i ]rc'dc`]Xc

J ]Y'Yb'8Ub\_]a 'J cfU g''''

8÷\_i ½J ½a 'd YXYa ''''

: cfa Uža i ]rc'dc`]Xc

: Øf'k Y]HYFY' ðZcfa U]cbYb'gh\Y]W' ðbYb'[ YfbY  
ni f'J YfZØ[i b["  
: cfa Uža i ]hc'dc`]Xc

Dc\_i X'Vi XYHY'dch Wcj Uh'U\_Ä\_c`j] XU É]bZcfa UWž  
bYj ½Y'HY'a ÷'\_cbHU\_hcj UH'

ðW'k ÄFY' ðbYb'Äi »YfghXUb\_VUFžk Ybb'G]Y'X]YgY  
5b[ Y'Y[ Yb\Y]hgc'gWbY'`k ]Y'a Q[ `]W' dfØZYb  
\_ÖbbHYb"  
: cfa Uža i ]hc'dc`]Xc

6mflUkVnW j Ya ]j X:ébUfMždc\_i X'VngjY'gY'dcXÉj UfUk  
bU'hi hc'n½Y ]hcgHw'bY'X Éj Y'

6]HY'Ubtk cfHYb'G]Y'i bgji a [ Y\YbXžXU  
: cfa Uždc`]Xc

CXdcj ðHY'dfcgĚa W' bY'X Éj Yždfcfc Y''

: Øf'k Y]HYFY' ðZcfa U]cbYb'gh\Y]W' ðbYb'[ YfbY  
ni f'J YfZØ[i b["  
: cfa Uždc`]Xc

Dc\_i X'a ½Y'n½Ya 'cXU É]bZcfa UWžbYj ½Y'HY'a ÷  
\_cbHU\_hcj UH'

ðW' ŽFYi Y'a ]W'U ZX]Y'Ni gJa a YbUfVY]H'  
: cfa Uždc`]Xc

H÷ Éa 'gY'bU'a c bci 'gdc'i df½W'

J ]Y'Yb'8Ub\_žØf' ðfY'< ]ZY' ]b'X]YgYf'5b[ Y'Y[ Yb\Y]H'  
: cfa Uždc`]Xc

8÷\_i ]j ½a 'nUJ U ]dca cWj hÄhc'n½Y ]hcgj]"

ðW' ŽFYi Y'a ]W'XUfU ŽZX]YgYb'GUMj Yf\Uha ]h'ðbYb  
ni 'VYgdfWVYb"  
: cfa UžX]fYfc

H÷ Éa 'gY'bUgW n\_i ž\_XYhc'Vi XYa Y'a cWjdfcVfUH'

: U`gG]Y'k Y]HYFY' ðZcfa U]cbYb'VYbÖh][ Yb''''  
: cfa UžX]fYfc

Dc\_i X'Vi XYHY'dch Wcj Uhj ÉW']bZcfa UWÉ''

K ]f'gWÄHYb'G]Y'Ug'? i bXY"  
: cfa UžX]fYfc

J ½Éa Yg]j U Édf½W'

6]HY'\_cbHU\_h]YfYb'G]Y'a ]W''A Y]bY'HY'YZcbbi a a Yf  
]g''''  
: cfa Uža i ]hc'X]fYfc

DfcgĚa ž'\_cbHU\_hi 'HY'a ÷!'a ^HY'YZcb'gd Éa ci ]c'Vci  
éfgc'Y''''

ðW'k ØFY'a ]W' ŽFYi YbžVUXj cb'ðbYb'ni '\ÖYb"  
A YbcgZcfa Uždc`]Xc

H÷ Éa 'gY'bUJ U ÉcXdcj ðë''

BY[ Ī V]cg  
9!A UJ`



A ]hZFYi bX`]WYb; f0»Yb  
: cfa UžXYg]bUhf]c`XY`bca Y`XYgVtb\W]Xc

G'dcnXfUJ Ya ž

A ]hZFYi bX`]WYb; f0»Yb  
: cfa UžLa d`La YbhY`i h`]nUXcžXYg]bUhf]c`XYgVtb\W]Xc

GY`gfXYébÙa `dcnXfUJ Ya ž

< cWUWkh b[ g c``  
: cfa Užb;c`La d`La YbhY`i h`]nUXcžbca Y`Xc`XYg]bUhf]c`Vtb\W]Xc

GÖMti ž

< Yfn`]WY; f0»Y  
=bZcfa UžYbhfY`dUFW]fcg`XY`bY[ Ī V]c`ei Y`gY`hfUÙa `dY`c`df]a Y]fc`bca Y

GY`gfXYébÙa `dcnXfUJ Ya ž

; f0»Y  
=bZcfa UžYbhfY`dUFW]fcg`XY`bY[ Ī V]c`ei Y`ZFYei YbhYa YbhY`hfUÙU`La `↑ bhcg

G'dcnXfUJ Ya ž#NXfUJ Éa ž