

Q}Áæ&&[¦åæ}&^Á¸å:@ÁÜÒŒÔPÁÜ^\*~|ææi[}ÁÒÔÁÞ[ÈFJ€ÏÐG€€Î

DfcXiWh. ÙÔPUUŠÁÔŒSÒÁØÜŒÕÜŒÞÔÒÁJFÎF€H

JYfg]cb. F

## GYWh]cb'%"'=XYbh]Z]WUh]cb'cZ'h\Y'giVghUbWY'cf'h\Y'a]IhifY'UbX'cZ'h\Y'gidd`]Yf

%"%"DfcX i Wh'=XYbh]Z]Yf

DfcXiWh']XYbh]Z]Yf. ÙÔPUUŠÁÔŒSÒÁØÜŒÕÜŒÞÔÒÁJFÎF€HÁÇÔ[}æâ}•KÒVPŸŠÁTÒVPŸŠÚPÒÞŸŠÕŠŸÔQÖŒVÒÊ

PÒŠQUVÜUÚQÞÒĒÁŠQÞŒŠUUŠĒÁXÒÜŒVÜŒŠÖÒPŸÖÒD

Ch\Yf']XYbh]Z]Yfg. ▷[}^

%"&"FY`YjUbh']XYbh]Z]YX'igYg'cZ'h\Y'giVghUbWY'cZ'a]IhifY'UbX'igYg'UXj]gYX'U[U]bgh

DfcXiWh'igYg. ئæ\*¦æ}&^•

"''8YhU]`g'cZ'h\Y'gidd`]Yf'cZ'h\Y'gUZYhm'XUhU'g\YYh

7c a dUbm bU a Y.Ôlæ-cã- ¡ÁŠVÖ

7c a dUbm UXXfYgg.Ô¦æ-cã- ~ |ÁŠVÖ

FÏÁÙcæ]|^å[}ÁÜ[æå U¦c[}ÁÙ[ˇc@\*æc^ Ú^c^¦à[¦[ˇ\*@

ÚÒGÁÎ VÖÃÕÓÁËÁW}āc^åÁSã}\*å[{

7 cbhUWh. Ü^\* ˈ|æc [ ¦ ^ÁŒ--æäł •Á

9!AU]`'UXXfYgg. @^||[ O & |æ-æ²- ˇ|Ė& [Ė`\
7 c a dUbm˙d\cbY. €F Ï HHÁJ Î H€GJ

%"('9 a Yf [YbWm'hY'Yd\cbY'bi a VYf

9 a Yf [YbWm'd\cbY. U č•ãå^ÁU~ã&^ÁP [ ˇ¦•KÁ€Ï Í€FFJGFFÏ

#### GYWh]cb'&"'<UnUfXg']XYbh]Z]WUh]cb

&"%'7'Ugg]Z]WUh]cb'cZ'h\Y'giVghUbWY'cf'a]IhifY

7`Ugg]Z]WUh]cb'ibXYf'FY[i`Uh]cb'fl97L'Bc'%&+&#&\$\$,

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Pæ:æ¦å[`•Ác[Ác@^ÁŒ``æci&ÁÒ}çi;[} {^}cÁËÅŠ[}\*Ēc^;{ÁPæ:æ¦åÁÔæc^\*[;^ÁH

PHFÏÊÂTæ^Á&æ\*•^Áæ}Áæ||^!\*å&Á•\â}Á!^æ&ci[]Ê

PHFJÊÁÔæˇ•^•Á•^¦ā[ˇ•Á^^Á⦦ācæcā[}È

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G][bU"kcfX.  $Yæ|_{i}^{*}$ 

<unufX'ghUhY a Ybhg. PHFÏÊÂTæ^Á&æ`•^Áæ}Áæ||^¦\*ã&Á•\ã}Á¦^æ&cã[}È

PHFJÊÁÔæˇ•^•Á•^¦ā[ˇ•Á^^Á⦦ācæcā[}È

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ÙÔPUUŠÁÔŒSÒÁØÜŒÕÜŒÞÔÒÁJFÎF€H DfcXiWh.

F JYfg]cb.

PIFGÊAPæ¦ {~~|Ac[Áæ~~æci&A|i~^A¸ic@A|[} \* A|æ•cia} \* A^~~^&c•È

Gidd'YaYbhU' =bZcf a Uh]cb.

ÒWPG€ÌÊÁÔ[}œã}•ÁÔUWTŒÜQÞÉÁÚÒÞVŒÖÒÔŒŠŒÔVUÞÒÈÁTæ^Á]¦[å~&^Áæ}Áæ||^;\*ã&Á¦^æ&cã[}È

DfYWUih]cbUfm ghUhY a Ybhg.

ÚGÎFÊÁŒç[ãåÁà¦^æc@ã}\*Áçæ][˘¦Á[¦Áå˘∙cÈ

ÚGÎ | ÊÁYæ•@Á@æ}å•Áæ}åÁ[c@^¦Á&[}cæ&c^åÁ•\ä}Ác@[¦[\*\*@|^Áæ-c^!Á@æ}å|ä}\*È

ÚGÏGĖÁÔ[}cæ{ä}æc^åÁ¸[¦\Á&|[c@ä}\*Á•@[ˇ|åÁ}[cÁà^Áæ||[¸^åÁ[ˇcÁ[-Ác@^Á¸[¦\]]æ&^È

ÚG Ï HÊÁŒÇ [ãåÁ¦^|^æ•^Ác [Ác@^Á^}ç㦠[ } { ^}cÈ

ÚGÌ€ÉÁY^æ¦Á]¦[c^&cáç^Á\*|[ç^•ð^^^Á]¦[c^&cá[}Ð-æ&^Á]¦[c^&cá[}Ĕ ÚH€GÐHÍGÊÁQØÁ∪ÞÁÙSQÞKÁYæ•@Á¸āc@Á]|^}c^Á[~Á•[æ]Áæ}åÁ¸æc^¦È

ÚHHÏÐHFHÊÁQ-Á^^Á⦦ācæcā[}Á]^¦•ā•c•KÁÕ^cÁ{^åā&æ|Áæåçā&^Đæcc^}cā[}È

ÚHÎHÊÂYæ•@Á&[}cæ{ã}æc^åÁ&|[c@ã}\*Áà^~[¦^Á¦^`•^È

ÚÍ€FĒÁÖā•][•^Á[-Á&[}c^}c•Ð&[}cæā}^¦Ác[Áæ]]¦[ç^åÁåā•][•æ|Á•āc^ĒÁā}Áæ&&[¦åæ}&^Á¸āc@Á|[&æ|

D]Whc[fUag.

&"''Ch\Yf'\UnUfXg

Ch\Yf'\UnUfXg. ÔUWTŒÜQÞÊÁÚÒÞVŒÖÒÔŒŠŒÔVUÞÒ Ù^} •ācã•^¦•Áå^&|æ¦^åÁ[}ÁæÁÔŠÚ

Pæ:æ¦åÁŠæà^K

P^å|[&æ|à[}ÁÔ[}&^}clæca[}ÁÃK €È€€Ã

GYWh]cb''"7cadcg]h]cb'#]bZcfaUh]cb'cb']b[fYX]Ybhg

'"&`A]IhifYg

7cbhU]bg.

BUaY	75G	97	F957< FY[]ghfUh]cb Bc"	ı	7`Ugg]Z]WUh]cb'Zcf fl7@DL'%&+&#&\$\$,</th><th>GdYW]Z]W'7cbW" @] a ]hgž'A!ZUWhcfg UbX'5H9g</th></tr><tr><td>ÖVPŸŠ TÒVPŸŠÚPÒÞŸŠÕŠŸÔ IÖŒVÒ</td><td>Ï ÏĒÌHĒÌ</td><td>G€FË€ÎFËÌ</td><td></td><td></td><td>ÙÙÁFÓĒÒPÁÔGLPHFÏĒ PIFFÉĒ</td><td></td></tr><tr><td>ÓÒÞZŸŠÁÓÒÞZUŒVÒ</td><td>FG€ËÍFËI</td><td>G€IËI€GËJ</td><td></td><td></td><td>ŒVUÁTĒÒPÁŒFĒÒPÁÔGL PH€GĒPT€€ĒPTFFĒĒ</td><td>[¦æ KÁŒVÒÁMÁFF΀ {*Ð\*Áà¸</td></tr><tr><td>ÒVPŸŠÁXŒÞQŠŠQÞ</td><td>FGFËHGË I</td><td>G€IËIÎIĒÏ</td><td></td><td></td><td>ÒÖŴGLPHFJÉ</td><td>[¦æ KÁŒVÒÁMÁH€€€ {*B\*Áà¸</td></tr><tr><td>ŠQÞŒŠUUŠ</td><td>ïÌĒÏ€ĒÎ</td><td>G€FËFHIËI</td><td>€FËGFFJIÏI€FÎËIGË¢¢¢¢</td><td></td><td>ÙÔŒĠÖÖŒĠËÙÙÁFÓL PHFÍĒPHFÏĒPHFJĒĒ</td><td>[¦æ KÁŒVÒÁMÁGÏJ€ {*Ð\*Áà¸</td></tr></tbody></table>
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Q}Áæ&&[¦åæ}&^Á¸ác@ÁÜÒŒÔPÁÜ^\*ઁ|æċá[}ÁÒÔÁÞ[ÈFJ€ÏÐG€€Î

DfcXiWh. ÙÔPUUŠÁÔŒSÒÁØÜŒÕÜŒÞÔÒÁJFÎF€H

JYfg]cb. F

PÒŠ(UVÜUÚ(ÞÒ	FG€ËÍÏË€	G€IËI€JĒÏ		FËŁÍ Ã	ÙÙÁFÓLPHFÏÊË	[¦æ KÁŒVÒÁMÁGÏ€€ {*Ð\*Áà,
ÇÒDĒTĒÇGĒTĒTĒ VÜQTÖVPŸŠĒFĒ ÔŸÔŠUPÒÝÒÞĒFĒŸŠDĒHĒ ÓWVÒÞĒGĒUÞÒ	ĬJĒÏ ÏĒÎ	G€FËGG∣ËH		FĒŁÍ Ã	Ò PÁÔGLP I FFÉÉ	[¦æ KÁŒVÒÁMÁHJI€ {*Ð\*Áà;
ÒVPŸŠ VÜQTÒVPŸŠÔŸÔŠUÚÒ ÞVÒÞÒÁÓWVÒÞUŠ	F€ÎFÌÍËÏÍËÍË GÌGFJËÎFËÎ	Ï€FËFGGËHÊ GIÌËJ€ÌËÌ	€FËGFFJÍGJGGIËIÍË¢¢¢¢	FĒŁÍ Ã	ÒÖQÁGĒÒPÁÔGLPHFJĒ PIFFĒĒ	
XŒÞûŠŠûÞ	FGFËHHË Í	G€IËIÎÍËG		FËŁÍ Ã	ÒÖŴGLPHFJÊĒ	å^¦{æ KÁŒVÒÁMÁG΀€ {*Đ\*Àà¸Ë[¦æ KÁŒVÒÁM HH€€Á{*Đ\*Áà¸
XÒÜŒVÜŒŠÖÒPŸÖÒ	FG€ËF⊺ËJ	G€IËHÏHĒG		FËŁÍ Ã	ŒVUÁTĒÙÙÁFÓLPH€GĒ PHFÏĒĒ	[¦æ KÁŒVÒÁMÁG€€€ {*Ð\*Áà¸
ÚÒÞVŒÖÒÔŒŠŒÔVUÞÒ	F€ÎË€GËÍ	G€HËHÍIĒÎ	€FËGFFJJÌÏHGHËHFË¢¢¢¢	€ÈFËŁFÃ	ÙÙÁFÓËÒPÁÔGLPHFÏË PIFFÉË	
ÔUWTŒÜQÞ	JFËÎ IËÍ	G€GË€ÌÎËÏ		€ÈFËŁFÃ	ŒVUÁTĒÙÙÁFÓĒÒPÁÔHL PH€GĒPHFÏĒPTFGĒĒ	[¦æ KÁŒVÒÁMÁÍ€€Á{*Ð\* à,

# GiVghUbWYg'k]h\'7caaib]hm'kcf\_d`UWY'YIdcgifY``]a]hg.

BUaY	75G	97	F957< FY[]ghfUh]cb Bc"	-	7`Ugg]Z]WUh]cb'Zcf fl7@DL'%&+&#&\$\$,</th><th>GdYW]Z]W`7cbW" @] a ]hgž`A!ZUWhcfg UbX`5H9g</th></tr><tr><td>ÖlÖVPŸŠÁÚPVPŒŠŒVÒ</td><td>Ì IĒÎ ÎĒG</td><td>G€FËÍÍ€ĒÎ</td><td>€FËGFFJIÌÎÎÌGËGÏË¢¢¢¢</td><td>Í€ËF€€Ã</td><td>ĒLĒĒĒ</td><td></td></tr></tbody></table>
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 $\label{lem:continuous} GiVghUbWYg'h\Uh'UfY'YbXcWf]bY'X]gfidhcfg'UWWcfX]b['hc'FY[i'Uh]cb'fl9IL'&$\%$+$$\&%$$'cf'FY[i'Uh]cb'fl9IL'&$\%$,$$*$$(fYUhYf'h\Ub'$"\%$i.$ 

Þ[cÁŒ]]|ã&æà|^

GiVghUbWYg'h\Uh'UfY'dYfg]ghYbhž'V]cUWWiai`Uh]jY'UbX'hcI]W'cf'jYfm'dYfg]ghYbh'UbX'jYfm'V]cUWWiai`Uh]jYž'[fYUhYfh\Ub'\$"% i.

Þ[cÁŒ]]|ä&æà|^

### GYWh]cb'(":]fgh!U]X'a YUgifYg

#### ("%'8YgWf]dh]cb'cZ'Z]fgh'U]X' a YUg i fYg

**=b\U`Uh]cb.** Ü^{[ç^Á-¦[{Á^¢][• ` \^Á•āc^Ác[Á-\^•@Áæä¦ÉÁ\^^]ÁæcÁ\^•cÉÁæ}åÁ[àcæā}Á{^åä&æ|Áæcc^}ci[}È

9mY`YldcgifY. QØÁQÞÁÒŸÒÙKÁÜä}•^Á&æ`čä[`\*•|^Á¸äc@Á¸æc^¦Á-[¦Á•^ç^¦æ|Á {ä}`c^•ÈÁÜ^ { [ç^Á&[}cæ&cÁ|^}•^•ÊÁā-Á]¦^•^}c

æ}åÅ^æ•^Âc[Åå[ËÅÔ[}cã} ~^Á¦ã}•ã}\*Ë

## ("&`Acgh`] a dcfhUbh`gm a dhc a g`UbX`YZZYWhgž`Vch\`UW i hY`UbX`XY`UmYX

Tæ^Á&æ`•^Áæ}Áæ||^¦\*ā&Á•\ā}Á¦^æ&cā[}È Ôæ`•^•Á•^¦ā[`•Á^^A⦦ācæcā[}È

# ("''=bX]WUh]cb'cZ'Ubm']a a YX]UhY' a YX]WU\'UhhYbh]cb'UbX'gdYW]U\'hfYUh a Ybh'bYYXYX

Þ[}^Á^¢]^&c^åÊÁ•^^ÁÙ^&cā[}Á∣ÈFÁ~[¦Á~~¦c@^¦Áā}~[¦{æcā[}È

Q}Áæ&&[¦åæ}&^Á¸ãc@ÁÜÒŒÔPÁÜ^\*~|ææi[}ÁÒÔÁÞ[ÈFJ€ÏÐG€€Î

DfcXiWh. ÙÔPUUŠÁÔŒSÒÁØÜŒÕÜŒÞÔÒÁJFÎF€H

JYfg]cb. F

# GYWh]cb').':]fYZ][\h]b['aYUgifYg

# 

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## )"&'GdYW]U``\UnUfXg'Uf]g]b['Zfca'h\Y'giVghUbWY'cf'a]IhifY

 $0 = \frac{1}{4 \cdot 2} \left( \frac{1}{2} \right) \left( \frac{1}{2}$ 

)"''5Xj]WY'Zcf'Z]fY'Z][\hYfg.

Q}Á&æ•^Á[-Áā}•~~ā&ā^}cÁç^}cá|æcā[}ÊÁ¸^æ¦Á•~ăcæà|^Á¦^•]ā!æc[¦^Á^~~ā]{^}cÈ

#### GYWh]cb'\*"'5WW]XYbhU''fY'YUgY' a YUg i fYg

# \*"% DYfgcbU`dfYWUih]cbgždfchYWh]jY'Yei]daYbh'UbX'YaYf[YbWm'dfcWYXifYg.

΍[ååÁå}@æ|æci[}ÈÁŒç[ååÁ&[}cæ&cÁ¸åc@Á•\å}Áæ}åÁ^^•ÈÁÙ^^Á]¦[c^&ciç^Á{^æ•`¦^•Á`}å^¦ÁÙ^&ci[}ÁÏÁæ}åÁÌÈ

#### \*"&'9bj]fcbaYbhU`'dfYWUih]cbg.

# \*"'`AYh\cXg'UbX'a UhYf]U``Zcf'WcbhU]b a Ybh'UbX'W`YUb]b['id.

Ü^ { [ç^Áā\*}āci[}Å•[~!&^•ÈÁÚ![çāå^Áæå^~~æc^Áç^}ci|æci[}ÈÁŒç[iåÁ^¢&^••āç^Áā}@æ|æci[}Á[-Áçæ][~!•ÈÁÔ[}cæá}Å•]ā||æ\*^ ā { {^åāæc^|^Áà^Á~•^Á[-Á•æ}åÁ[!Áā}^!cÁ][¸å^!ÈÁÖi•][•^Ā[-Áæ&&[!åä}\*Ác[Á|[&æ|Á!^\*~|æci[}•È

# \*"('FYZYfYbWY'hc'ch\Yf'gYWh]cbg.

Œ|•[Á¦^~^¦Ác[Á•^&cã[}•ÁÌÁæ}åÁFHÈ

#### GYWh]cb'+"'<UbX']b['UbX'ghcfU[Y

#### +"%'DfYWUih]cbg'Zcf'gUZY'\UbX`]b[.

# +"&'7cbX]h]cbg'Zcf'gUZY'ghcfU[Yž']bW' i X]b['Ubm']bWc a dUh]V]`]h]Yg.

Ùc['^hâ}hæh, ^||Ēç^}cā|æc^åh]|æ&^ÈhS^^]h&[}cæâ}^!hcã\*@c|^h&|[•^åÈhS^^]h&[[|ÈhÕ:[~}åĐà[}åh&[}cæâ}^!hæ}ah!^&^içā}\*
^~~i] {^}cĒhW•^h^¢]|[•ā[}Ē]![[-h^|^&cia&æ|Ēhç^}cā]æcâ}\*hæ}åh[ā\*@câ}\*ha~~i] {^}cĒhW•^h[}|^h}[]Ē•]æ!\ā}\*hc[[|•ĒhVæ\^]!^&æ\*cā[}æ!^h {^æ•~i^•hæ\*æâ}•ch•cæcā&hāā•&@æ!\*^È

#### +"'GdYW]Z]W'YbX'i gYflgŁ.

Ølæ\*læ}&^•KÁÁW•^Ái}Áæ&&[låæ}&^Á¸ic@Á\*[[åÁ{æ}`~æ&c`li}\*Áæ}åÁi}å`•cliæ|Á@^\*i^}^Á]læ&ci&^•È

Q}Áæ&&[¦åæ}&^Á¸ác@ÁÜÒŒÔPÁÜ^\* ~|ædi[}ÁÒÔÁÞ[ÈFJ€ÏÐG€€Î

DfcXiWh. ÙÔPUUŠÁÔŒSÒÁØÜŒÕÜŒÞÔÒÁJFÎF€H

JYfg]cb. F

#### GYWh]cb', "'9 I dcg i fY'Wcbhfc`g#dYfgcbU`'dfchYWh]cb

#### , "%' 7 cbhfc`'dUfU a YhYfg

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ÖlÖVPŸŠÁÚPVPŒŠŒVÒ	Ì IĒÎ ÎĒG		WSÁŠ[]*Ēc^¦{Á^¢][•`¦^Á ã{ācÁÇÌĒ@[`!ÁVΥŒD Ç{*Ð{HD	ÍÁ{*Ð{
OUCVPTSHUPVPUSEVU	ITTETTEG	G€FĒÍÍ€ĒÎ	WSÁÙ@[!cĒc^! {Á^¢][•~'!^Á ā {ācÁÇFÍĒ {ā}~c^D Ç{*Ð{HD	F€Á { *Ð {

# , "&'9 I dcg i fY'7cbhfc`g

# 9mY'#'G\_]b'DfchYWh]cb

Y^æ¦Á]¦[c^&ciç^Á\*|[ç^•D^^^Á]¦[c^&ci[}D-æ&^Á]¦[c^&ci[}

# FYgd]fUhcfm'DfchYWh]cb

#### GYWh]cb'-"'D\mg]WU\'UbX'W\Ya]WU\'dfcdYfh]Yg

## -"%'=bZcf a Uh]cb'cb'VUg]W'd\mg]WU`'UbX'W\Y a ]WU`'dfcdYfh]Yg

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DfcXiWh. ÙÔPUUŠÁÔŒSÒÁØÜŒÕÜŒÞÔÒÁJFÎF€H

JYfg]cb. F

DUfh]h]cb'WcYZZ]W]Ybh.'b!cWhUbc`#kUhYf'fl`c[ P[c\da^c^\ {\ai}^a

jU`iYŁ.

JUdcif'dfYggifY. €ÎĴJJ€ÏIJÏÁ{{P\*

8Ybg]hm'UbX#cf'fY`Uh]jY'XYbg]hm. FȀJ΀

 FY`Uh]jY`jUdcif`XYbg]hm.
 Þ[då^c^¦ {i}^å

 DUfh]W`Y`W\UfUWhYf]gh]Wg.
 Þ[då^c^¦ {i}^å

- "& Ch \ Yf ']bZcf a Uh]cb. Þ[ } ^Áæçæi|æà|^

# GYWh]cb'%\$"'GhUV]`]hm'UbX'fYUWh]j]hm

%\$"%'FYUWh]j]hm.

Ú¦^•^}c•Á}[Á•ã\*}ā-ā&æ}ch!^æ&cāçāc^Á@æ:æ¦åÊÁà^Áāc•^|~Á[¦Áā}Á&[}cæ&ch¸āc@h¸æc^¦È

%\$"&'7\Ya]WU`'ghUV]`]hm.

 $\tilde{O}[[\mathring{a}\mathring{A} \circ c\mathring{a}\mathring{a}\mathring{a}]\mathring{a}c^{\mathring{A}^*}]\mathring{a}^{\mathring{A}}[!{\mathring{a}}\mathring{A} \circ c[!\mathring{a}^*\mathring{A}\&[]\mathring{a}\mathring{a}\mathring{c}\mathring{a}[]) \bullet \mathring{E}$ 

%\$"'`Dcgg]V]`]hm`cZ`\UnUfXcig`fYUWh]cbg.

Þ[cÁ^¢]^&c^åÁ`}å^¦Á}[¦{æ|Á&[}åācā[}•Á[~Á`•^È

%\$"('7cbX]h]cbg'hc'Ujc]X.

΍[äåÅ^¢c¦^ { ^Å@^æcÈ

%\$") =bWc a dUh]V`Y` a UhYf]U`g.

΍[äåÁ&[}cæ&cÁ¸āc@Á•c¦[}\*Áæ&äå•ÊÁæ|\æ|ā•Á[¦Á[¢äåā•ā}\*Áæ\*^}c•È

%\$"\*'<UnUfXcig'XYWcadcg]h]cb'dfcXiWhg.

Þ[cÅ^¢]^&c^åÉ

## GYWh]cb'%%"'HcI]Wc`c[]WU`']bZcf a Uh]cb

#### %%"%'=bZcfaUh]cb'cb'\UnUfX'W'UggYg'Ug'XYZ]bYX']b'FY[i`Uh]cb'fl97L'Bc'%&+&#&\$\$,

V@ā•Á{ā¢cˇ¦^Á@æ•Á}[cdà^^}Ác^•c^åÁæ•ÁæÁ¸@[|^Á-[¦Á@^æ|c@Á^--^&c•ÈÁV@^Á@^æ|c@Á^--^&c•Á@æç^Áà^^}Á&æ|&ˇ|æc^åÁˇ•ã}\*Ác@^
{^c@[å•Á[ˇc|ā}^åAā}ÁÜ^\*ˇ|æċā[}ÁçÔŎDÁÞ[ÁFGÏGÐG€€ÌÁÇÔŠÚDÈ

5WihY'Hcl]W]hm. Óæ•^åÅ[}Åæçæi|æà|^Ååæækc@^Å&|æ••i-å&æci[}Å&!ic^\iaækæ;^Å}[cÅ{^cÊ

 Œ& \* c^ÁV [ ¢å&åc^ÁU !æ|
 NÍ€€€

 Œ& \* c^ÁV [ ¢å&åc^ÁÖ^! {æ|
 NÍ€€€

 Œ& \* c^ÁV [ ¢å&åc^ÁÚ } @æ|æċi [ }
 Þ [ cÁŒçæå|æà|^

G\_]b'Wcffcg]cb#]ff]hUh]cb. Óæ•^åÅ[}Áæçæi|æà|^ÁåæææÁc@^Á&|æ••i∻i&æci[}Á&¦iċ^¦iæÁæ!^Á}[cÁ{^cÈ

 GYf]c i g'YmY'XU a U [Y#]ff]hUh]cb.
 Ò^^ÁÖæ { æ\*^ÁÐÁQ!!äcæci [ }ÁÔæc^\* [!^ÁG

 FYgd]fUhcfm'cf'g\_]b'gYbg]h]gUh]cb.
 Ù^}•āci:æci [ }ÁÊÁÙ\ã}ÁÔæc^\* [!^ÁF

; Yf a 'WY`` a i hU[Yb]W]hm.

Óæ•^åÅ[}Åæçæi|æà|^ÅåæcæÁc@^Á&|æ••i-ā&æci[}Å&¦iċ^\iæÁæ¦^Á}[cÁ { ^cÈ
7UfW]bc[Yb]W]hm.

Óæ•^åÅ[}Åæçæi|æà|^ÅåæcæÁc@^Á&|æ••i-ā&æci[}Å&¦iċ^\iæÁæ¦^Á}[cÁ { ^cÈ
FYdfcXiWh]jYhcI]W]hm.

Óæ•^åÅ[}Åæçæi|æà|^ÅåæcæÁc@^Á&|æ••i-ā&æci[}Å&¦iċ^\iæÁæ¦^Á}[cÁ { ^cÈ
GHCH!g]b[`Y'YldcgifY.

Óæ•^åÅ[}Åæçæi|æà|^ÅåæcæÁc@^Á&|æ••i-ā&æci[}Å&¦iċ^\iæÁæ¦^Á}[cÁ { ^cÈ
GHCH!fYdYUhYX'YldcgifY.

Q}Áæ&&[¦åæ}&^Á¸åc@ÁÜÒŒÔPÁÜ^\* ~|æċa[}ÁÒÔÁÞ[ÈFJ€ÏÐG€€Î

DfcXiWh. ÙÔPUUŠÁÔŒSÒÁØÜŒÕÜŒÞÔÒÁJFÎF€H

JYfg]cb. F

5gd]fUh]cb \UnUfX.

Óæ•^åÁ[}Áæçæi]æà|^ÁåæcæÁc@^Á&|æ••i~i&æci[}Á&;ic^;iæÁæ;^Á}[cÁ{^cÈ

# =bZcf a Uh]cb'UVc ih'\UnUfXc i g']b [fYX]Ybhg']b'h\Y' a]Ih i fY

=b [fYX]Ybh	75G	97	@8)\$#5H9 <sup>·</sup> CfU	@8)\$#5H9 8YfaU`	@7)\$#5H9 =b\U`Uh]cb	@7)\$ FcihY
ÓÒÞZŸŠÁÓÒÞZUŒVÒ	FG€ËÍFËI	G€IËI€GËJ	FF΀	Þ[cÁæçæã æà ^	Þ[cÁæçæã æà ^	Þ[c æçæi æà ^
XÒÜŒVÜŒŠÖÒPŸÖÒ	FG€ËF∣ËJ	G€IËHÏHËG	G€€€	Þ[cÁæçæã æà ^	Þ[cÁæçæã æà ^	Þ[c æçæi æà ^

Ü^-^!Ác[ÁÙ^&cā[}•ÁGÁæ}åÁHÁ-[!Áæååācā[}æ|Áā}-[!{æcā[}È

# %%"&'=bZcf a Uh]cb'cb'ch\Yf'\UnUfXg

Þ[cÁŒ]]|ã&æà|^

#### GYWh]cb'%&"'9Wc`c[]WU`']bZcf a Uh]cb

#### %&"%'Hc | ]W]hm.

Pæ¦ {~~|Ác [Áæ~~æcã&Á|ã~^Á ¸ãc@Á| [ } \*Á|æ•cã} \*Á^~~^&c•È

 %&"&"DYfg]ghYbWY'UbX'XY[fUXUV]`]hm.
 ▷ [clæçæi|æà|^

 %&"'6]cUWWi a i`Uh]jY'dchYbh]U`.
 ▷ [clæçæi|æà|^

 %&"('AcV]`]hm']b'gc]`.
 ▷ [clæçæi|æà|^

%&") FYg i hg cZD6H'UbX jDj6'UggYgg a Ybh.

V@a•Á•~à•cæ}&^Áå[^•Á}[cÁ{^^cÁc@^ÁÚÓVÐçÚçÓÁ&fāc^fāæÁ[~ÁÜÒŒÔPÊÁæ}}^^¢ÁÝQQÈ

%&"\*`9bXcWf]bY`X]gf i dh]b [`dfcdYfh]Yg. ▷ [⋈Œ] ]|i&æà|^
%&"+`Ch\Yf`UX j YfgY`YZZYWhg. ▷ [⋈œçæi|æà|^

# GYWh]cb'%'"'8]gdcgU`'Wcbg]XYfUh]cbg

#### %'"%'KUghY'hfYUhaYbh'aYh\cXg.

# GYWh]cb'%("'HfUbgdcfh']bZcf a Uh]cb

	%("%`IB biaVYf.	%("&`IB'DfcdYf'G\]dd]b['BUaY.	%("' HfUbgdcfh \UnUfX'W'Ugg flYgŁ.	GiV <sup>·</sup> F]g	%("(`DUW_]b[ ; fc i d.
IB'AcXY` FY[i`Uh]cbg	Þ[c & æ••ã~ã^å	Ë	Ë	Ë	Ë
=A8;	Þ[c & æ••ã~ã^å	Ë	Ë	Ë	Ë
58FžF=8ž58B	Þ[c & æ••ã~ã^å	Ë	Ë	Ë	Ë

Q}Áæ&&[¦åæ}&^Á¸ác@ÁÜÒŒÔPÁÜ^\*ઁ|æċá[}ÁÒÔÁÞ[ÈFJ€ÏÐG€€Î

DfcXiWh. ÙÔPUUŠÁÔŒSÒÁØÜŒÕÜŒÞÔÒÁJFÎF€H

JYfg]cb. F

=75C'H=	Þ[c	Ë	Ë	Ë	Ë
	& æ••ã~ã^å				

%(")'9bj]fcbaYbhU``\UnUfXg.

Þ[cÁ^}çá¦[} { ^}cæ||^Á@æ:æ¦å[˘•Á~[¦Ác¦æ}•][¦c

%("\*'GdYW]U`'dfYWUih]cbg'Zcf'igYf.

Þ[}^Áæååää[}æ|

 $%("+"HfUbgdcfh"]b"Vi"_"UWWcfX]b["hc"5bbYI"="cZ"A5FDC@+"#+,"UbX"h\Y"=67"7cXY.$ 

Þ[cÁ&|æ••ã~ã^å

# GYWh]cb'%)"'FY[i`Uhcfm']bZcf a Uh]cb

%) "%'GUZYhmž'\YU`h\'UbX'Yb j]fcb a YbhU``fY[i`Uh]cbg#`Y[]g`Uh]cb'gdYW]Z]W'Zcf'h\Y'g i VghUbWY'cf' a]Ih i fY
[] ^\frac{\partial}{\partial}

%) "& 7 \ Y a ]WU` GUZYhm 5 ggYgg a Ybh

ŒÁÔ@^{ ā&æ|ÁÙæ~^c^ÁŒ••^••{ ^}cÁ@æ•Á}[cÁà^^}Á&榦ā^åÁ[˘cÁ~[!Ác@ā•Á]¦[å˘&cÈ

# GYWh]cb'%\*"'Ch\Yf']bZcf a Uh]cb

**7cbWYbhfUh]cb** · · · · @]a]hg. ÒÖQÁGMÎÎÈÎÏÃÁÙÙÁFMFGÈÍ€ÃÁÒPÁÔHMFHÈÎGÃÁÒÖQÁGŒMÎÎÈÎÏÃ

HchU`: fUWh]cbU``JU`iYg. ÒÖØÁGMFÈÍ€ÁÙÙÁFMÌÈ€€ÁÒPÁÔHMÏÈHIÁÒÖØÁGŒMFÈÍ€

?Ym'hc'fYj]g]cbg.

Þ[cÁæ]]|ã&æà|^

?Ym'hc'UVVfYj]Uh]cbg.

5VVfYj]Uh]cb	AYUb]b[	
ŒVUÁI	Œ&~c^ÁV[¢ā&āc^ÁĒÁU¦æ]ÁÔæc^*[;^ÁI	
ÒÖ0ÁG	Ò^^kÖæ { æ*^kblû ;licæci [ }kÔæc^* [ ; ^kG	
ÒPÁŒF	Pæ:æ¦å[~•kc[kc@^kŒ~~æci&kÒ}çi;[} {^}ckĒkŒ&~c^kPæ:æ¦åkÔæc^*[!^kF	
ÒPÁÔG	Pæ:æ¦å[ˇ•kc[kc@^kŒˇˇæċå&kÒ}çå [} {^}ckĒkŠ[}*Ēc^¦{kPæ:æ¦åkÔæc^*[!^kG	
ÒPÁÔH	Pæ:æ¦å[ˇ•kc[kc@^kŒˇˇæċå&kÒ}çå [} {^}ckĒkŠ[}*Ēc^¦{kPæ:æ¦åkÔæc^*[!^kH	
PH€G	Pæ  {~` ÁæÁ•¸æ  [¸^åÈ	
PHFÍ	Ôæˇ•^•Á•\â}Áà!¦ācæcā[}È	
PHFÏ	Tæ^&&&`•^&æ}&# ^:*å&&•\å}&!^2*å&d*\å}&!	
PHFJ	Ôæ´•^•Á•^¦ā[´•Á^^^Á⦠łācæcā[}È	
PI€€	X^!^Ác [ ¢à&Ác [ Áæ´ ` æcà&Á à-^È	
PIFF	V [¢à&Ác [Áæˇˇæcà&Á à-^Á¸àc@Á [}*Á æ•cà}*Á^^&c•È	
PIFG	Pæ! {~~ Ác[Áæ~~œci&Á i-^Á¸ic@Á [}*Á æ•ci}*Á^-^&c•È	
ÚGÎF	Œç[ååÁà¦^æc@å} *Áçæ][ ~¦Á[¦Áå *•cÈ	
ÚGÎI	Yæ•@Á@æ}å•Áæ}åÁ[c@^!Á&[}cæ&c^åÁ•\ã}Ác@[![~*@ ^Áæ-c^!Á@æ}å ã}*È	
ÚGÏ€	Ö[Á}[cÁ^æcÉÁå¦ã}\Á[¦Á•{[\^Á,@^}Á~•ã}*Ác@ã•Á]¦[å~&cÉ	
ÚGÏG	Ô[}cæ{i}æc^åÅ,[¦\Á& [c@i}*Á•@[ˇ åÅ}[cdà^Áæ  [,^åÅ[ˇcd[-Ác@^Á,[¦\]]æ&^È	
ÚGÏH	Œç[ååÁ¦^ ^æ•^Ác[Ác@^Á^}çå¦[} {^}cĖ	
ÚGÌ€	Y^æ!Á];[c^&cáç^Á* [ç^•B^^^Á];[c^&cá[}B-æ&^Á];[c^&cá[}È	

DfcXiWh. ÙÔPUUŠÁÔŒSÒÁØÜŒÕÜŒÞÔÒÁJFÎF€H

JYfg]cb. F

ÚH€FÐHFG	QØÁÙ Y ŒŠŠU Y ÒÖKÁ&æ  ÁæÁÚUQÙU ÞÁÔÒÞVÒÜÁ [ ¦Áå [&c [ ¦Ð] @↑•å&åæ}Áå-Á↑ [ ˇÁ-^^ Áˇ } ¸^  È
ÚH€G∂HÍG	ΩØÁUÞÁÙSQÞKÁΥæ•@Á¸åc@Á] ^}c^Á[-Á•[æ]Áæ}åÁ¸æc^¦È
ÚH€ÍÐHÍFÐHHÌ	@@WPAQYQUKAU&}•^&&&`&[`• ^A¸&@A¸&c^!A-[!A•^ç^!æ A{&}`c^•ËAU^{[ç^A&[}cæ&cA ^}•^•ËA&A]!^•^\$cA#}&A^æ•^Ac[ &[EAQ[]ca}`^A!&}•&}
ÚHH€	Üá}•^¼{[ˇc@È
ÚHHHÐHFH	Q-Á•\à}Á⦦āœcā[}Á[¦Á¦æ•@Á[&&~¦•KÁŐ^cÁ{^åä&æ Áæåçå&^Bæcc^}cā[}È
ÚHHÏÐHFH	(J-Á^^^Ái¦iaœci[}Á]^¦•á•c•KÁÕ^cÁ{^åi&æ Áæåçi&^Ðæcc^}ci[}È
ÚHÎG	Væ\^Á[~Á&[}cæ{i}æc^åÁ& [c@i}*Áæ}åÁ¸æ•@Áà^-[¦^Á¦^`•^È
ÚHÎH	Yæ•@Á&[}cæ{ä}æc^âÁ& [c@ä}*Áà^~[!^Á!^~•^È
ÚHJF	Ô [  ^&d.•]ā  æ*^È
ÚÍ€F	Oå•][•^A[-k&[}c^}c•B&[}cæi}^!Ac[Aæ]]![ç^åhåi•][•æ h•ic^Êhi}Aæ&&[!åæ}&^A¸ic@h [&æ h!^*` æci[}•È
ÙÔŴG	Ù\à}ÁÔ[;;[•á[}ÁÐÁQ;¦ácæcá[}ÁÔæc^*[;^ÁG
ÙÙÁFÓ	Ù^}•ācāːæcā[}ÁĒÁÙ\ā}ÁÔæc^*[¦^ÁFÓ

V@^Aā}~[|{ æci[}Ai}Ac@ā•A•æ-^c^AåæcæA•@^^cAi•Ac[Ac@^Aà^•cA[-A['|A\}[,|^å\*^Ac|`^Aæ}åAæ&&`|æc^Aà`cAæ||AåæcæÊAi}•c|`&ci[}•Ê
!^&[{ {^}åæci[}•Aæ}åB[|A•\*\*^•ci[}•Aæ}Ac]iA•\*\*