



C.!)(3(.4!0(')%!=->!L=.?\$)5.9(.4'/K!-53\$'/!'.1!>5?().'.3(M!'.'/0%\$%!#'%!D(359(!'.!\$9&5)4'.4! &')4!52!4#(!\$.?(%49(.4!&)53(%%!6\$?(.!4#(!\$.3)('%\$.6!'44(.4\$5.!D(\$.6!&'\$1!45!4#(!%\*%4'\$.'D\$/\$40!'.1! %53\$(4'/!\$9&'34!52!\$.?(%4\$.6!\$.!'!359&'.0!5)!D\*%\$.(%%H!C.!35.4)'%4!45!4)'1\$4\$5.'/!%453@!\$.1\$3(%K!=->! 5.(%!')(!D'%(1!5.!%53\$'/!)(%&5.%\$D\$/\$40!3)\$4()\$'!45!%3)((.!'.1!%(/(34!4#(\$)!359&5.(.4%H!!R335)1\$.6! 45!4#(!A-BC!LA5)6'.!-4'./(0!B'&\$4'/!C.4().'4\$5.'/M!<E<;!>/5D'/!C.%4\$4\*4\$5.'/!C.?(%45)!%\*)?(0!L'! %\*)?(0!52!<EE!'%%(4!5:.()!\$.%4\$4\*4\$5.%!:\$4#!'%%(4%!454'//\$.6!'&&)58\$9'4(/0!S;T!4)\$//\$5.M!5?()!4#)((6 7\*')4()%!LFFUM!52!\$.?(%45)%!\$.3)('%(1!=->!\$.?(%49(.4%!P%\$6.\$2\$3'.4/00!5)!P951()'4(/00!\$.!<E<K! D(#'?\$5\*)K!'.1!:#(4#()!4#(\$)!&)5&()4\$(%!')(!4#(!%'9(!25)!1\$22()(.4!6)5\*&%!52!35\*.4)\$(%H!Y5)!4#\$%! &\*)&5%(!4:5!1\$22()(.4!/5.6G9(95)0!9(4#51%K!%&(3\$2\$3'//0!+,-!'.'/0%\$%!'.1!2)'34\$5.'/!\$.4(6)'4\$5.K! ')(!'&&/\$(1!45! A - BC!1'4'!%&'..\$.6!4#(!&()\$51!<EEFG<E<EH!"#()(25)(!4#(!&)(%(.4!%4\*10!\$%!9\*3#! 95)(!359&)(#(.%\$?(!4#'.!&)(?\$5\*%!5.(%K!%\*3#!'%!A0.#')14!(4!'/H!L<E;FMK!:#\$3#!253\*%(1!5.!'! %9'//()!%\*D%(4!52!\$.1\$3(%!'.1!5./0!3'))\$(1!5\*4!+,-!'.'/0%\$%H!=?\$1(.3(!52!6)('4()!(22\$3\$(.30!52!4#(! =->!\$.1\$3(%!:5\*/1!&)5?\$1(!'.!'11\$4\$5.'/!)('%5.!25)!%53\$'//0!)(%&5.%\$D/(!\$.?(%4\$.6K!:#\$/%4!'!#\$6#()! 1(6)((!52!&)(1\$34'D\$/\$40!:5\*/1!&)5?\$1(!5&&5)4\*.\$4\$(%!45!9')@(4!&')4\$3\$&'.4%!45!9'@(!'D.5)9'/! &)52\$4%!D0!9('.%!52!'&&)5&)\$'4(/0!1(%\$6.(1!4)'1\$.6!%4)'4(6\$(%H!!

"#(!/'05\*4!52!4#(!&'&()!\$%!4#(!25//5:\$.6H!-(34\$5.!<!&)5?\$1(%!'!D)\$(2!)(?\$(:!52!4#(!)(/(?'.4! /\$4()'4\*)(H!-(34\$5.![!1(%3)\$D(%!4#(!1'4'!'.1!5\*4/\$.(%!4#(!(9&\$)\$3'/!9(4#515/560H!-(34\$5.!Z!&)(%(.4%! 4#(!(9&\$)\$3'/!)(%\*/4%H!-(34\$5.!\_!&)5?\$1(%!%59(!35.3/\*1\$.6!)(9')@%H!!

## 4A) /B9<:29C:<)#<DB<=)

"#(!N+C!LN)\$.3\$&/(%!25)!+(%&5.%\$D/(!C.?(%49(.4\K!:#\$3#!\$\%!'!W`G\%\*&&5)4(1!.(4:5)@!52!\$.?(%45)\%! :#5\%(!'\$9!\$\%!45!&)5954(!\%\*\%4'\$.'D/(!\$.?(\%49(.4\K!:'\%!4#(!2\$)\%4!45!1(2\$.(!=->!3)\%4()\$'!5.!4#(!D'\%\%! 52!:#\$3#!'!454'/!\%35)(!\$\%!3'/3\*/'4(1!25)!('3#!359&'.0\K!:#\$3#!)(2/(34\%!4#(!/(?(/!52!35)&5)'4(!\%53\\$'/!))(\%&5.\%\$D\\$\\$40!LB-+M!'.1!1(4()9\$.(\%!4#(!:(\\$6#4!52!4#(!359&'.0!\$.!4#(!=->!\$.1(8\H!=->!\$.1(8\H!=->!1'4'!')(! \*\%(1!45!359&')(!4#(!&()25)9'.3(!52!35.?(.4\\$5.'/!?()\%\*\%!\\$53\\$'/0!)(\%&5.\%\$D/(!\$.1\\$3(\%!'.1!9\*4\*'/! 2\*.1\\H!-4'49'.L<EEEM!25\*.1!4#'4!=->!\$.1\\$3(\%!5\*4&()25)9!35.?(.4\\$5.'/!5.(\%!\%\*3#!'\%!4#(!-aN!\_EEH! B5)4(b!(4!'/\H!L<EEVM!\\#5:(1!4#'4!4#(0!&()25)9!D(44()!\$.!4#(!=\*)5&('.!9')@(4\%!4#'.!\$.!4#(!\W-!5.(\\H! c5&(b!(4!'/\H!L<EEFM!359&')(1!4#(!2\$.'.3\\$'/!&()25)9'.3(!52!359&'.\\$(\\%!:\\$4#!\\\$53\\$'/G)(\\&5.\\\$D/(! \$.?(\\\$49(.4!L-+CM!:\\$4#!4#'152!

.5!(?\$1(.3(!4#'4!4#(0!5\*4&()25)9!4#(\$)!35.?(.4\$5.'/!&(()%H!c(\$4(!'.1!B5)4(b!L<E;[M!35.2\$)9(1!4#'4! 1\$22()(.3(%!D(4:((.!-+C!2\*.1%!'.1!35.?(.4\$5.'/!5.(%!')(!.54!%4'4\$%4\$3'//0!%\$6.\$2\$3'.4H!!!

= /! > #5\*/!' . 1!d') 5\*\$! L < E; XM!35 . 3/\*1(1!4#'4!#\$6#GB - +!2\* . 1%!')(!5\*4&()25)9(1!D0!/5: GB - +!2\* . 1%!')(!2\* . 1)(!2\*

L<E<; MK!: #5!'. '/0%(1!4#(!Q5::!^5.(%K!=\*)5%4588K!'.1!J'.6!-(.6!95.4#/0!'.1!:((@/O!%\*%4'\$.'D/(! '.1!4)'1\$4\$5.'/!\$.1\$3(%\!#\$6#!/(?(/%!52!&()%\$%4(.3(!:()(!5D%()?(1!\$.!'//!3'%(%!'.1!.5!1\$22()(.3(%! :()(!1(4(34(1!'3)5%%!9')@(4%H!N()%\$%4(.3(!\$%!'!9('%\*)(!52!9')@(4!(22\$3\$(.30!'%!1\$%3\*%%(1!D0! A'.1(/D)54!L;VF<M!'.1!N(4()%!L;VV;K!;VVZMH!N)(?\$5\*%!%4\*1\$(%!'.'/0%\$.6!\$4!25)!?')\$5\*%!2\$.'.3\$'/! 9')@(4%!'/%5!\$.3/\*1(!>)((.(!'.1!Y\$(/\$4b!L;VFFMK!c5!L;VV;MK!^'35D%(.!L;VV\_MK!B5%4'!'.1! e'%35.3(/5%!L<EE[MK!g.'/\$!'.1!>511')1!L<E;;MK!B'&5)'/(!(4!'/H!L<E;XMH!

)

## H6) I + 4 + ) + 07) \* & 4J(7(\$(#5)))

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 $-\Sigma$  " ! H! ! L<M!

[H!! R33\*9\*/'4(1!1(?\$'4\$5.%! #\$"!2)59!4#(!'?()'6(!",!25)!('3#!%\*DG&()\$51! "!')(!1(2\$.(1!))

'%1!

H!! ! L[M!

"#(!)'.6(!\$%!1(2\$.(1!'%!4#(!9'8\$9\*9!\$.1(8! #\$"!9\$.\*%!4#(!9\$.\$9\*9! #\$"K!:\$4#\$.!('3#!

%\*DG&()\$51!L "MI!

!!! ! LZM!

ZH!! "#(!%4'.1')1!1(?\$'4\$5.! !\$%!3'/3\*/'4(1!25)!('3#!%\*DG&()\$51! "1!

H!!!L\_M!

 $\_H!! = '3\#!)' . 6(! *''!*! . 5) 9 '/*(1!D0!1*?*1*.6!D0!4\#(!35))(**5.1*.6! *''!#()(25)(*!4\#(!))(6.5) 9 '/*(1!*3'/(!1*)*.6!('3\#!*DG*())*51! *'**!" *''!C.!*4(*!<!'D5?(*!'1k'3(.4!*DG*())*51*!52!)/(.64\#!.!')(!5D4'*.(1H!"#**K!4#(!'?()'6(!+,-!25)!/(.64\#!.!*)*1(2*.(1!'*1!)))) = 0$ 

H!!!LXM!

 XH!!
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FH!! "#(!/('%4!%7\*')(!9(4#51!\$%!\*%(1!45!(%4\$9'4(!4#(!(7\*'4\$5.!

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"#(!%/5&(!52!4#(!)(6)(%%\$5.!/\$.(!\$%!'.!(%4\$9'4(!52!4#(!J\*)%4!(8&5.(.4! H!LJ\*)%4X!;V\_;MH!!

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"#(!J\*)%4!(8&5.(.4!/\$(%!\$.!4#(!\$.4()?'/!oEK!;pH!g.!4#(!D'%\$%!52!4#(!J!?'/\*(%!4#)((!3'4(65)\$(%! 3'.!D(!\$1(.4\$2\$(11!4#(!%()\$(%!')(!'.4\$G&()%\$%4(.4K!'.1!)(4\*).%!')(!.(6'4\$?(/0!35))(/'4(1!LE!q!J!r!EH\_M\! 4#(!%()\$(%!')(!)'.159K!)(4\*).%!')(!\*.35))(/'4(1K!'.1! -4')4.6!: 4#!4#(!=->!.13(%!\*.1()!4#(!'%%\*9&4.5.!52!

NRBCYCB!	)8SGSHK)	!GEHE[Z!	!GEHE[_!
	V8SGS [ [ Y))))8SGSFPX)	LGEHEK!!!!GEHE; <m!< td=""><td>LGEHE_XK!!!!GEHE;<m!< td=""></m!<></td></m!<>	LGEHE_XK!!!!GEHE; <m!< td=""></m!<>
I +CB - !	)SGSKZ)	!EHEZF!	!EHEZX!
	V8SGSF\Y)))))SGSTPX)	LGEHE;XX!!!!EHET <m!< td=""><td>LGEHE;_K!!!!EHET;M!</td></m!<>	LGEHE;_K!!!!EHET;M!

TK#! 7%54#/!.)!;\*50!

 $B\#\$. '!'. 1!-5*4\#!R2)\$3'`K!'. 1!/5.6!9(95)0!L\$H(HK!1!v!EM!\$\%!1(4(34(1!\$.!4\#(!3'\%(!52!4\#(!C.1\$`K!h5)/1K!)))))\\=9()6\$.6!A')@(4\%K!=RY=!'.1!I+CB-!\$.1\$3(\%H!))$ 

W.1()!4#(!'%%\*9&4\$5.!52!35))(/'4(1!())5)%!4#(!4\$9(!4)(.1!\$%!5./0!%\$6.\$2\$3'.4!25)!4#(!h5)/1! \$.1(8K!:#\$/%4!\$.!4#(!)(9'\$.\$.6!3'%(%!D54#!4#(!\$.4()3(&4!'.1!4#(!4\$9(!4)(.1!')(!\$.%\$6.\$2\$3'.4H!R.4\$G &()%\$%4(.3(!\$%!25\*.1!\$.!4#(!3'%(!52!4#(!

- ()\$(%!	`5!1(4()9\$.\$%4\$3! 4()9%!	R.!\$.4()3(&4!	R.!\$.4()3(&4!'.1!'! /\$.()!4\$9(!4)(.1!
W-R!	8S(SHU)	GEHEZ </th <th>GEHEZT!</th>	GEHEZT!
	V8S(SUSY))))S(SSKX)	LGEHEV;K!!!!EHEEZM!	LGEHEV;K!!!!EHEEZM!
Wd!	8S(ŠZ[)	GEHEF_!	GEHEFX!
	V8S(FFSY)))8S(SKFX)	LGEH;EVK!!!GEHEZ;M!	LGEH;; <k!!!gehez<m!< td=""></k!!!gehez<m!<>
BJC`R!	8S(SPT) V8S(S[UY)))8S(SSFX)	GEHE <t! LGEE_VK!!!</t! 	

1 \$./"(+	2 /).\$+''')%\$+\$##''#%	2 /).\$+''')%\$+\$##''#%+		3''4''##\$5, .\$(+\$##''#%+	
<b>! '' - ' .#)\$</b> %+	678+	<b>! '' '9\$'.)'' ' ,</b> 5++	<b>678</b> +	<b>! '' '9\$ ' .</b> )'' ' ,5++	
6 [ R!	EMBM=_#!!	EMBM=_#!	MBMM=!!	EMBM>_!	
	VEMBOM=2!!!EMBM \ MY!	VEMBOM=2!!!EMBMX \ Y!	VEMBMN>2!!!!MBMOPY!	VEMBM M2!!!!MBMMPY!	
6A!	EMBMN\ <sup>#</sup> !	EMBMNP <sup>#</sup> !	EMBM=N#!	EMBM\Q <sup>#</sup> !	
	VEMBM <b>P_</b> 2!!!EMBMMNY!	VEMBMPO2!!!EMBMMNY!	VEMBONN2!!!EMBM>>Y!	VEMBOOM2!!!EMBMPOY!	
G@]`R!	EMBMNM!	MBMM\!	EMBM <b>P</b> >#!	EMBMN=#!	
	VEMBMQN2!!!MBMMPY!	VEMBMOX2!!MBM>PY!	VEMBM==2!!!EMBMMOY!	VEMBMQ_2!!!EMBMMOY!	
]`"]R!	!MBMM_#!	!MBM>> <sup>\$</sup> !	!MBM>O!	!EMBMMX!	
	VEMBMO>2!!!MBM>>Y!	VMBMON2!!!MBMQNY!	VEMBMM_2!!!MBMXMY!	VEMBM>O2!!!MBM>XY!	
aR?R`!	EMBOM>#!	E E			

VEMBONM2!!!EMBM=OY!

R%!3'.!D(!%((.K!:\$4#!:#\$4(!.5\$%(!())5)%K!4#()(!')(!1\$22()(.3(%!D(4:((.!4#(!4:5!%(4%!52! \$.1\$3(%!5./0!\$.!4#(!3'%(!52!C.1\$'!'.1!4#(!I+CB-K!:#()(!%#5)4!9(95)0!L1!n!EM!3#')'34()\$%(%!4#(! =->!\$.1\$3(%!'.1!/5.6!9(95)0!L1!v!EM!4#(!35.?(.4\$5.'/!5.(%K!'.1!'/%5!\$.!4#(!3'%(!52!-5\*4#!R2)\$3'K! :#()(!4#(!=->!\$.1(8!(8#\$D\$4%!'.4\$G&())%\$%4(.3(!'.1!4#(!35.?(.4\$5.'/!5.(!%#5)4!9(95)0!\$.%4('1H!I0! 35.4)'%4K!:#(.!'//5:\$.6!25)!'\*4535))(/'4\$5.K!1\$22()(.3(%!')(!25\*.1!\$.!4#(!3'%(!52!4#(!h5)/1K!=RY=! '.1!N'3\$2\$3!\$.1\$3(%K!4#(!=->!5.(%!D(\$.6!3#')'34()\$%(1!D0!%#5)4!9(95)0!L1!n!EM!!'.1!4#(! 35.?(.4\$5.'/!5.(%!D0!'.4\$G&()%\$%4(.3(!L1!r!EMH!

C.! 6(. () '/K! 4#(!2)'34\$5. '/! \$.4(6)'4\$5.!)(%\*/4%!35.2\$)9!4#5%(!D'%(1!5.!4#(!+,-!'.'/O%\$%K! .'9(/0!4#()(!')(!.5!%\$6.\$2\$3'.4!1\$22()(.3(%!\$.!4()9%!52!4#(!1(6)((!52!&()%\$%4(.3(!D(4:((.!4#(!4:5! %(4%!52!\$.1\$3(%H!Y\*)4#()K!#\$6#()!&()%\$%4(.3(!\$%!25\*.1!25)!(9()6\$.6!9')@(4%!4#'.!25)!1(?(/5&(1!5.(%K! 4#(!25)9()!'&&(')\$.6!45!D(!/(%%!(22\$3\$(.4H!"#(%(!2\$.1\$.6%!\$9&/0!4#'4!4)'1\$.6!'.1!\$.?(%49(.4! %4)'4(6\$(%!D'%(1!5.!4#(!=->!\$.1\$3(%!')(!.54!95)(!&)52\$4'D/(K!4#5\*6#!4#()(!9\$6#4!D(!%35&(!25)!

N5%%D/(! (8&/'. '4%5.%! 25)! 4#(%(!)(%\*/4%! %.3/\*1(! 1%22()(.4! 40&(%! 52! x3' 95\*2/'6(y! 5))))x: '\%#\\$.6y! L\%((!>)'0\X! <EEXMX!.'9 (/0! 4#(! 9\%)(\&)(\%(.4'4\\$5.!52!'! 359&'.00\%! =->!)(35)1! DO! (8'66()'4\\$.6! \\$4\%! (.?\\$)5.9 (.4'/!3)(1(.4\\$'/\%! Lx6)((.!: '\%#\\$.6yMX! 5?()\%4'4\\$.6! 4#(!\\$9&'34! 52!'.! \\$.?(\%49(.4!5.!/'D5\*)!5)!#\*9'.!)\\$6#4\%!Lx\\$53\\$'/!: '\%#\\$.6yMX!3)('4\\$.6!4#(!2'/\%(!\\$9\&)(\%\\$5.!52!D(\\$.6! c>I"!L/(\%D\\$'.\\$!6'0\X!D\\$\%(8\*'/\\$!'.1!4)'.\%6(.1()\M!2)\\$(.1/0!Lx\&\\$.@!: '\%#\\$.6yMX!\\$\\$6.\\$.6!\*&!25)!4#(!\\`! 359&'34!'.1!\*\\$.6!4#(!\\`!/565!45!\%#\\$24!'44(.4\\$5.!2)59!35.4)5?()\%'/!D\*\\$.(\%\!\&)'34\\$3(\\!LxD/\*(! : '\%#\\$.6yMX!5)!#\\$6#/\\$6#4\\$.6!\&)56)(\%\!45:')1\%!\\$59(!-\*\\$4'\\$.'D/(!Q(?(/5&9(.4!>5'/\%!L-Q>M!:#\\$\%4! #\\$1\\$.6!\\\$59(!7\*(\%4\\$5.'D/(!D\*\\$.(\%\!\&)'34\\$3(\\!\\$.14#(!\&')\%\*\\$4!52!\&)52\\$4!Lx-Q>!: '\%#\\$.6yME!C.!'//!\\\*3#! 3'\%(\\!359\&'.\\$(\%X!1(\\&\\$4(!4#(\\$)!'//(6(1!=->!3)(1(.4\\$'/\%X!D(#'?(!\\$.14#(!\\'9(!:'0!'\\$135.?(.4\\$5.'\X! \&)52\\$4G\%((@\\$.6!5.(\\!'.114#\*\\$1\\$4!\\\$\!.54!\\\*)\&)\\$\\$\\$.6!\#'4\\$4\\$4\\$3'/\\&)5\&()4\\$(\\!52!\#(\\$)!\\$453\&\!'.114#(!\\ 35))(\\\$\\$5.1\\$.6\\$.1\\$3(\\!\\#5\*/1!D(!\#('\\'9(E!!)

C.!&)'34\$3(!\$4!\$%!524(.!1\$22\$3\*/4!45!\$1(.4\$20!x: '%#\$.6y!6\$?(.!4#(!(8\$%4\$.6!)(6\*/'4\$5.%!5.!=->! )(&5)4\$.6\!25)!\$.%4'.3(&!5./0!5.!;E!A')3#!<E<;!: '%!4#(!=W!+(6\*/'4\$5.!<E;V,<ETT!&)5&5%(1!D0!4#(!

6:!

 $=*)5\&('.!B5*.3\$/!5.!<F!^{5?}(9D()!<E;V!'\&\&)5?(1!D0!!#(!=*)5\&('.!N')/\$'9(.4!!#!\$)!\$!!'.!'44(9\&4!$  45! 3)('4(!'!3/'\$)!\$2\$3'4\$5.!52! 6)((.!L%\*%4'\$.'D/(M!'34\$?\$4\$(%!'.1!)(6\*/'4(!4#(\$)!1%3/5%\*)(H!C4!\$%!) .54(:5)4#0!##'4!#(!I+CB%!35\*.4)\$(%!')(!/('1()%!\$.!\$9&/(9(.4\$.6!=->!)(&5)4\$.6!&)'34\$3(%HC.!<E<EK!) ##(0!:()(!'95.6!4#(!45&!<E!35\*.4)\$(%!!\$.!4()9%!52!=->!)(&5)4\$.6!)(6\*/'4\$5.%!'.1!4#(!%#')(!52!) 359&'.\$(%!)(&5)4\$.6!5.!%\*%4'\$.'D\$/\$40!LC.1\$'1!;T!)(6\*/'4\$5.%!VT!U!52!)(&5)4\$.6!359&'.\$(%!I)'b\$/!!  $;T!'.1!T_U!)(\%\&(34\$?(/0)!B#\$.'1!;:!'.1!FTU!)(\%\&(34\$?(/0!G!dNA>K!<E<E)!e'.!1()!c*64K!<E<EMH!)$  Y5)!(8'9&/(K!\$.!C.1\$'K!'//!\$%4(1!359&'.\$(%!')(!)(7\*\$)(1!45!1\$%3/5%(!%\*%4'\$.'D\$)\$40!\$.25)9'4\$5.!\$.!

\$.!\$4%!?')\$5\*%!25)9%M\!4#\*%!\$4!\$%!.54!%\*)&)\$%\$.6!4#'4!4#(\$)!%453@%!%#5\*/1!#'?(!4#(!%'9(!&()%\$%4(.3(!

&)5&()4\$(%!'%!4#5%(!52!35.?(.4\$5.'/!5.(%H!!

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 $\begin{array}{l} RD\$1\$. & k! - h!mHk! \ a \ !>' . & k!BH!L < E \ ; FM!Q5!\%53\$'//0!)(\%\&5 . \%D/(!\$ . ?(\%49(.4\%!\%4)'4(6\$(\%!\%\$6 . \$2\$3' . 4/0!)(1*3(!1*?()\%2\$3'4\$5 . !D(.(2\$4\%|!N'\&()!\&)(\%(.4(1!'4!4\#(!N)53((1\$.6\%!G!<<.1!C.4().'4\$5 . '/!B5.6)(\%\%!5 . !A51(//\$.6!' . 1!-\$9*/'4\$5 . & AgQ-CA!< E \ ; FK!FFFGFT[h!!] \end{array}$ 

 $I (33\#(44\$\&! c H\&! B\$3\$)(44\$\&! + H\&!!Q'/ \&: H\&! a ! J ()b(/\&! - H:L < E; M! - 53\$'//0!)(\%&5.\%D/(!'.1!35.?(.4\$5.'/! \&: ?(\%49(.4!2*.1\%1!\&()25)9'.3(!359\&')\%5.!'.1!4\#(!6/5D'/!2\$.'.3\$'/!3)\%\%H! R\&\&/\$(1!=35.59\$3\%H! ZFL<_M\&!<_Z; G<_X<H!; EH; ETE, EEE[XTZXH<E; ZH; EEE_; FH!!$ 

I/5592(/1K!NH!L; VF[M!R.!(8&5.(.4\$'/!951(/!25)!4#(!%&(34)\*9!52!'!%3'/')!4\$9(!%()\$(%H!I\$59(4)\$@'K!XEK!<;FG<<XH!

B'&5)'/(K! >H! AHK! >\$/GR/'.'K! CHK! N/'%4\*.K! RHK! a! A'@')(.@5K! CH! L<E; XM! c5.6! 9(95)0! \$.! 4#(! W@)'\$.\$'.!%453@!9')@(4!'.1!2\$.'.3\$'/!3)\$%(%H!^5\*).'/!52!=35.59\$3%!'.1!Y\$.'.3(K!ZE!L<MK!<[\_G<\_FH!

B#\$'&&\$.\$K!JHK!e(.45K!>HK!a!Q(!N'/9'K!cH!L<E<;M!"#(!\$9&'34!52!35?\$1G;V!/53@15:.%!5.!%\*%4'\$.'D/(! \$.1(8(%H!-\*%4'\$.'D\$/\$40!L-:\$4b()/'.1MK!;[!LZMK!;G;TH!;EH[[VE,%\*;[EZ;TZX!

 $\begin{array}{l} B5)4(bK!AH!a!c(\$4(K!NH!L<\!E;\_M!N()25)9'.3(!52!=*)5\&('.!-53\$'//0!+(\%\&5.\%\$D/(!Y*.1\%!1*)\$.6!A')@(4!) \\ B)\$(\%!!=?\$1(.3(!2)59!Y)'.3(H!C.4().'4\$5.'/!+(?\$(:!52!Y\$.'.3\$'/!R.'/0\%\$H!ZEK!;[<6;Z;H!;EH;E;X,kH\$)2'H<\!E;\_HE\_HE;<H!! \\ \end{array}$ 

B5)4(bK!AH:-\$/?'K!YH!a!R)('/K!`H!L<EEVM!-53\$'//0!+(%&5.%\$D/(!C.?(%4\$.6!\$.!4#(!>/5D'/!A')@(41!"#(!N()25)9'.3(!52!W-!'.1!=\*)5&('.!Y\*.1%H!C.4().'4\$5.'/!^5\*).'/!52!Y\$.'.3(!a!=35.59\$3%H!;F!L[MH!;EH<;[V,%%).H;[Z<ZXVH!!

B\*.#'K!YH!RH!YH!QH!-K!1(!g/\$?(\$)'K!=H!AKK!g)%'45K!+H!^K!d/54b/(K!AH!BKK!BO)\$.5!g/\$?(\$)'K!YH!cKK!a! B'\$'15K!+H!>H!>H!<E<EM!B'.!%\*%4'\$.'D/(!\$.?(%49(.4%!5\*4&()25)9!4)'1\$4\$5.'/D(.3#9')@%|!(?\$1(.3(! 2)59!6/5D'/!%453@!9')@(4%H!I\*%\$.(%%!-4)'4(60!'.1!4#(!=.?\$)5.9(.4K!<VL<MK!XT<GXVFH! ;EH;EE<,D%(H<[VFH!

Q'#/#'\*%K!+H!L;VTVM!=22\$3\$(.4!&')'9(4()!(%4\$9'4\$5.!25)!%(/2G%\$9\$/')!&)53(%%H!R..'/%!52!-4'4\$%4\$3%!;FK!;FZVG;FXXH!

1(!Q\$5%GR/\$k'K!"H!1(/!+~5!B'D'//()5K!AH!>\$/GR/'.'K!cH!RH!a!A')4\$.Ge'/9'05)K!AH!L<E<;M!-453@! 9')@(4!\$.1\$3(%!'.1!%\*%4'\$.'D\$/\$401!R!359&')\$%5.!D(4:((.!4#(9H!^5\*).'/!52!-\*%4'\$.'D/(!Y\$.'.3(! '.1!C.?(%49(.4!;EH;ETE,<EZ[EFV\_H<E<;H;TVXVTTH!

Q\*)].G-'.459\$/K! NHK! >5.b]/(bK! cHK! Q59\$.6\*(%K! +H! a! +(D5)(15K! ^H! L<E;VMH! •H! ;;H! <VF<H! ;EH[[VE,%\*;;;E<VF<H!!

=/!>#5\*/K!-H! a!d')5\*\$X! RH! L<E; XM! Q5(%! B5)&5)'4(!-53\$'/!+(%&5.%\$D\$/\$40! R22(34! A\*4\*'/! Y\*.1! N()25)9'.3(!'.1!Y/5:%|H!^5\*).'/!52! I'.@\$.6! a!Y\$.'.3(H!FFH!; EH; E; X,kHkD'.@2\$.H<E; XH; EHEEVH!!

>\$/GR/'.'K!cH!RHK a !+5D\$.%5.K!NH!AH!L;VVFM!"(%4\$.6!52!\*.\$4!)554!'.1!54#()!.5.%4'4\$5.')0!#0&54#(%(%! \$.! 9'3)5(35.59\$3! 4\$9(!%()\$(%H!^5\*).'/!52! =35.59(4)\$3%K! TEK! <K! <Z;G<XTH!;EH;E;X,-E[EZG

 $+ (\#9'.K!+H!WHK!m\#'.6K!^HK!W\&\&'/K!^HK!B*//$.'.K!BHK!a!R@)'9!`'\%((9K!AH!L<E;XM!R)(!(.?$)5.9(.4'/! \%53$'/!65?().'.3(!(7*$40!$.1$3(\%!'!D(44()!3#5$3(!25)!$.?(\%45)\%|!'.!'\%'.!\&())\&(34$?(H!I*\%$.(\%)!=4#$3\%K!<LZMK!ZZE6Z_VH!15$I;EH;;;;D(()H;<;<F!$ 

+5D\$.%5.K! NHAH!L; VVZM! =22\$3\$(.4!4(%4%!52!.5.%4'4\$5.')0!#0&54#(%(%K!^5\*).'/!52!4#(!R9()\$3'.!-4'4\$%4\$3'/!R%%53\$'4\$5.!TVK!; Z<EG; Z[FH!

+5D\$.%5.K!NHAH!L;VV\_M!>'\*%%\$'.!%(9\$G&')'9(4)\$3!(%4\$9'4\$5.!52!/5.6G)'.6(!1(&(.1(.3(H!R..'/%!52! -4'4\$%4\$3%K!<[K!;X[EG;XX;H!

-3#)f1()K!AHL<EEZM!"#(!N()25)9'.3(!52!-53\$'//0!+(%&5.%\$D/(!C.?(%49(.4%1!C.?(%49(.4!Y\*.1%!'.1! C.1\$3(%H!Y\$.'.3\$'/!A')@(4%!'.1!N5)425/\$5!A'.'6(9(.4H!;TH!;<<G;Z<H!;EH;EEF,%;;ZETG



^\#'',&) 9 GPE) I 50+ ' \D) L]?)+0+53\3) (:)4J&) C? !)+07)D(02&04\(0+\$) \* ? - @)\07\D&3E)4J&)D+3&) (:) \* ? - @) 1\_)

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^\#'',&) 9 GHE) I 50+ ' \D) L]?)+0+\$53\3)(:)4J&) C? !)+07)D(02&04\(0+\$) \* ? - @)\07\D&3E)4J&)D+3&)(:) \* ? - @) - J\0+)

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^\#'',&) 9 GKE) I 50+ ' \D) L]?)+0+53\3) (:)4J&) C? !)+07)D(02&04\(0+\$) \* ? - @)\07\D&3E)4J&)D+3&) (:) \* ? - @)@07\+)



 $! \\ ^{\#'',\&) 9 \& E I 50+ ' & D L]?) + 0 + $53 & (:)4J\&) C? ! ) + 07 \\ D (02 & 04 & (0+) * ? - @) & 07 & D&3E \\ * ? - @)? (''4J)9 : & D+) \\ (:)$ 

^\#'',&) 9 GZE) I 50+ ' \D)L]?)+0+53\3)(:)4J&)C? !)+07)D(02&04\(0+\$) \* ? - @)\07\D&3E)4J&)D+3&)(:) \* ? - @) ` (,\$7)

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^\#'',&) 9 GTE) I 50+ ' \D)L]?)+0+53\3)(:)4J&)C? !)+07)D(02&04\(0+\$) \* ? - @)\07\D&3E)4J&)D+3&)(:) \* ? - @)/L@ -)

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! ^\#'',&)9(FPE)I50+ '\D)L]?)+0+\$53\3)(:)4J&)C?!)+07)D(02&04\(0+\$)\*?-@)\07\D&3E)4J&)D+3&)(:) \*?-@)/L@-)

!

9..&07%<)/) I50+'%D)L]?)+0+\$53%3