```
! "#$%
                        &$#'"("$\\$))\\$*+,$)-+'\\
3 ( ' ( $\\!4544!
6*7&! 8 (997&!0.12*$$1.!12!:#\*.7;/!7&+!"#$\#&'(#$)*+!<;)197.=>*7;)*.!!
"*?7.%@*&%!12!A(@7&!"*-*91?@*&%!7&+!B(7&%#%7%#-*!8*%)1+191'/!!
C199* '*!12!D+(;7\\#1&E!, &\#-*.\$\#\/!12! 8 7./97&+!
C199* '*!07.FE! 87./97&+!45GH4=IIJI!
KJ5IL!H5M=4N4I!
?79*07&+P(@+0*+(!
RSCT " U!5555=555I=G5V5=4MN4!
&'./+00".)$*\\")#+'+0#0!
3;7+*@#;!"*-*91?@*&%!
: *7.&#&'!
:#\\*.7; \/!7\&+!\S\*7+\#\&'!\C1\@\?.\*\)\*\&\\#1\&!
W&1X9*+'*!7&+!D?#$\\*@#:!Y*9#*2$!
8 1\\| - 7\\| 1\&!\\ 1! : \*7.\&!
+ - 1 ( $ #" . )!
Y030!!
           8 0D+0!!
           S*7+#&'[D9*@*&\7./!7&+!D7.9/!C)#9+)11+!D+(;7\#1&!KS*7+#&'!<?*;#79#$\LE!67@*$!!
                  87+#$1&!, &#-*.$#%/E!IZGZ!
     !
0)("(!!
           S*7+#&'E!, &#-*.$#\/!12!87./97&+!7\!C199*'*!07.FE!IZNI!
+ - 1 ( $ #" . ) $ * \( + \, \& + \' \' + \) ( + 0!
"#$\\#&'(\#$)\*+!,\&\#-\*.$\\\\!O.12\*$$1.E!,\&\\#-\*.$\\\\\!12!87.\\97&\+E!45IZ=?.\*$\\\\\!
\#$#\#\&'!0.12*\$1.E!, &#-*.$#\/!12!3(;F97&+E!3(;F97&+E!]*X!^*797&+E!4515=45IG!
6*7&! 8 (997&!0.12*$$1.!12!:#\*.7; /E!, &#-*.$#\/!12! 8 7./97&+E!455N!
"#$\#&'(#$)*+!<;)197.=>*7;)*.E!,&#-*.$#\/!12!87./97&+E!4555=455I!
O.12*$$1.E!A(@7&!"*-*91?@*&\E!.&#-*.$#\/!12!87./97&+E!IZZM=?.*$*&\!
0.12*$$1.E!D+(;7\\dagge1879!O$/;)191'/!7\&+!D+(;7\\dagge1879!C(..\dagge198+!T\&\dagge\).(;\\dagge18E!>\timesO7\$!3_8!
      , &#-*.$#%/E!IZZI=IZZM!
7.7+(7\\*!3\$\#\\7\\\E!\,\&\#-\*.\$\\/!12!\87./97\\&+E!\C199\\*'\*!12!\D+(;7\\\#1\\\E!\IZN5=IZNI!
, &#-*.$#\/!12! 8 7./97&+E!IZGZ=IZN5!
<; ) 119$E! \ #. '#&#7E!IZGG=IZGZ!
```

```
: 7&'(7'*!3.\$!7&+!S*7+\#&'!>*7;)*.E!`.7+*!ME! d 11+$\1;F!8\#++9*!<;)119E!<)*&7&+17)!C1(&\/!
       O(b9#;!<;)119$E!\#.'#&#7E!IZGH=IZGG!
<; #*\&; *!>*7; )*.E! `.7+*!ME! d 11+$%1;F! 8 #++9*!<; )119E!<)*&7&+17)!C1(&%/!0(b9#;!<; )119E!
       \ #. '#&#7E!IZGJ=IZGH!
0)/$#;79!<;#*&;*!>*7;)*.E!`.7+*$!G[NE!<\\\\)!>)1@7$! 8 1.*!<;)119E! 3 .9#&'\\1&E!\\\\\\#.'#&\\#TE!IZG5=IZGI!
($'++'\\$(2"+!3+)#\\$4$'-0\\
5$"67"4*7%*73"*8,7'%(,$*.6,4"9:*%;*5426,7'%(E! d 7$)#&'\1&! " CE!45450!
       7&+!#&%*.&7\\#1&79!7\$1;\#7\\*\$!X)1!7.\*!\*9\*;\\*+!1&!\\)\*!\b7\$\#$!12!1(\\\$\\7\&+\\&'\!\$;)197.\$)\#?!
       .*97\\*+!\\1!*+(;7\\#1\&0!a1(\&+*+!\#&!IZVME!\))*!@\\$\\#1\&!12!]3D+!\\$!\\1!7+-7\&;*!)\#')=e(79\\\/!
       .*$*7.;)!\1!#@?.1-*!*+(;7\\1&!?19\\\;/!7\&+!?.7\\\\\\\!?!!
<:$#', *<6-'=("-*. /, -4E!"#-#$#1&!CE!3@*.#;7&!D+(;7\#1&79!S*\$*7.;)!3\$1;#7\\#1&E!455G\!!!
       >)#$!7X7.+!.*;1'&#f*$!7!?.1'.7@!12!X1.F!%)7%!)7$!$#'&#2#;7&%9/!#&29(*&;*+!%)#&F#&'!7&+!
       .*$*7.;)!#&!%)*!2#*9+!12!9*7.&#&'!7&+!#&$%.(;%#1&0!!T&!?7.\#;(97.E!\%)*!7&&(79!7X7.+!#$!
       +*$#'&*+!\\1!\)1\&1.!;(..*\&\\!.*\$*7.;\)!\\)7\\!\)7\\!\)7\\!\!\7\\!\+12!
       #&$%.(;%#1&0
```

] 7@\*+!1&\*!12!%)\*!2#-\*!)#')9/!\$(;;\*\$\$2(9!2\*@79\*!\*+(;7\\tau 1\tau 79!?\\$/;)191'\tau \\tau \\\tau \\tau \\tau \\tau \\tau \\tau \\tau \\tau \\tau \\tau \\\tau \\tau \\tau \\tau \\tau \\tau \\tau \\tau \\tau \\\tau \\tau \\\tau \\tau \\\tau \\\tau \\tau \\\tau \\\tau \\\tau \\\tau \\\tau \\tau \\\tau \\

R (\$\$7&+#&'!S\*-#\*X\*.E!D''#'''/\*%;\*5426,7'%(,\$\*D''0'',-63E!3@\*.#;7&!D+(;7%#1&79!S\*\$\*7.;)! 3\$1;#7%#1&E!45INE!45440!

C1@?7\$\$!3X7.+!21.!\$#'&#2#;7&%!;1&%.#b(%#1&\$!%1!%)\*!+#.\*;%#1&!7&+!+\*-\*91?@\*&%!12!;(..#;(9(@!7&+!#2%).(;%#1&!7%!Y\*&;)@7.F!<;)119E!8\*+#7!03E!87/!45IV0!

 $C199*'*!12!D+(;7\%1\&E!,\&\#-*.\$\#/!12!&7./97\&+E!DO;*99*\&;*!\#\&!>*7;)\#\&'!3X7.+E!45IJ=45IH!\\S*;\#?\#*\&\%!12!\%)*!,\&\#-*.\$\#/!12!&7./97\&+!</\$\%*@!S*'*\&\%\$!a7;(9\%/!3X7.+!21.!&*&\%1.#\&'!45I4!\\ \#\$#\#\&'!<;)197.E!Y*\&!`(.#1\&!,\&\#-*.\$\#/E!Y**.!<)*-7E!T\$.7*9E!45II!\\ \#\$#\#&'!<;)197.E!,&#-*.$ 

 $C199*'*!S*?.*$*&\%7\%#-*E! 8 < C!D\&+1X*+!:*;\%(.*!<*.#*\$E!IZNH! \\ R(\%\%7\&+\#\&'!]*X!a7;(9\%/!3X7.+E!"*-*91?@*&\%!C1(\&;#9E!C199*'*!12!D+(;7\#1\&E!IZNJ!))$ 

 $3\,9*O7\&+*.E!O0!\,3\,0!K\#\&!?.*\$L0!>)*!\#\&\%*.?97/!12!F\&1X9*+'*E!\$\%.7\%*'\#*\$E!7\&+!\#\&\%*.*\$\%!\#\&!\%)*!\\ +*-*91\,?@*\&\%!12!*O?*.\%\#\$*!X\#\%)\#\&!?.12*\$\$\#1\&\$0!T\&!60!`9r;F9*.E!C0!d#\&;)E!_!30!80!O(&\$\%*\#\&!KD+\$0L!$ 

 $39*07\&+*.E!O0!3 (E!`.1$\%\#; F9*!0*\%*.\$1\&E!D0!8 (E!"(@7\$E!"(E!\_!A7\\%7\&E!C0!\K451NL0!3!.*\%.1\$?*;\#-*!7\&+!?.1\$?*;\#-*!*07@\#&7\\#1&!12!;1'\&\#\#-*!\$\.7\\*'\#\$!7&+!7;7+*@\#;!+*-*91?@*&\U!\d)*.*!)7-*!X*!;1@*!\#&!\X*&\/=2\#-*!/*7.\$s!T&!3(!Rp"1&&*99!\KD+(\LE!\BU;\%-4*3,(4=\\\@*\%;*"426,7'\%(,\$*&0:63\\%\)):0!]*X!o1.FU!R021.+!,&\#-*.$\#\/!0.*$\QRESON R&\\&\*\!0(\b9\#;7\\#1&!"7\\*\U!\&7\\*\U!\&87/!451N!!+1\#U!$ 

```
39*07&+*.E!00!30!K45IVL0!>)*!7.'(@*&\$!21.!7&+!\)*!.*7$1&\&'!7b1(\!*?\\\\\@#;!;1'&\\\\13!
       .*$?1&$*!\\1!\\)*!;)7?\\*.\$!1\&!?\$/;)191'\#;79!?\*.\$?\*;\\\#-\*\\0!T\&!6\\0!3\\0!\`.\*\\&\\*E! d \\0!3\\0!\<7\&\+1-7\\9!
       !T0!Y.x^**&!KD+$0LE!S, (4=\%\%\%\%,*''\&'07''9'6*6\%)('7'\%(*K??0!I55=II5L0!]*X!o1.FU!
       S1(\%9*+'*0!
: 1(')9#&E!<0!8 (E!_!39*07&+*.E!O(!30!K45IVL()!T&+#-#+(79!+#22*.*&;*$!.*97\\#1&$!7&+!#&\\*..*97\\#1&$\!!
       S*;1&;#9#&'!#$$(*$!12!+*2#&##1&E!+/&7@#$@E!7&+!+*-*91?@*&\0!!T&!O0!30!3229*.b7;)!KD+0LE!
       o 1.FU!S1(\%9*+'*0!
a7.9*/E!a0E!39*O7&+*.E!O0!30E!*\;1790!K45IML0!32\;\X1.+\$!TU!O*.\$?*;\\#-*\$!1&!\\)*!?7\\E!?.\$\$\\E!?.
       2(\%(.*!12!*+(;7\%12*);)191'/0!!T\&!:0!C1.\&1!_!D0!3\&+*.@7\&!KD+\$0L0!!S,(4=\%\%0*\%;*)
       "426,7'%(,$*&0:63%$%):!KJ<sup>#$</sup>!*+Œ!??0!HIM=HJ4L0!]*X!o1.FU!S1(\%9*+'*0!
39*07&+*.E!00!30E!`.1$$&#;F9*E!D0!80E!_!:#$\\E!30!K45IHL0!7-#'7\\#&\'!\)*!97b/.\#&\\)!12!\*7;)*.!
       @1\#-7\#1&$!7&+!*@1\#1&$Q!!T&!OQ!S#;)7.+$1&E!<Q!W7.7b*&#;FE!_!AQ!d7\\KD+$QL!?",63"-*
       9%7'#,7'%(]*?3"%-:*, (4*&-,67'6"*K??Q!IM5=IVJLQ!] *X!o1.FU!S1(\(\gamma\)9*+'*\(\quad \)!
39*O7&+*.E!O0!30E! !Y7''*\\7E!O0!K45IHL0!O*.;*?\=;1&;*?\!;1(?9\&'!7&+!)(@7&!*..1.0!!T&!"0!]0!
       ,&&$'''4*&''-0&''67'#''0*;-%9*6%)('7'#''*06'''(6''*,(4*73''*''426,7'%(,$*06'''(6''0*K??0!4ZG=J4GL)!!
       Y1$\%1&U!! 8 T>!0.*$$0!!
87' '#1&#E!: 0E!a10E!D0E! !39*07&+*.E!00!30!K45IHL0!Y*9#*2$!7b1(\%!.*7+#& 'E!\**0\\E!7&+!9*7.&\#& '!2.1@!
      %*O%(!A\)!a#-*$!_!8\)!`.*'1#.*=`#99!KD+$\(\)LE!Z(7"-(,7"\(,$*3,(4=\%\@*\%;*-"0",-63*\(\*7",63"-*
       = "$'";0*K??0!JMJ=JVZL0!!] *X!o1.FU!>7/91.! !a.7&;#$0!!
;)7&'*U!C1&;9(+#&'!%)1(')%$0!T&!<0!\1$&#7+1(!KD+0LE!Z(7"-(,7"%(,$*3,(4=\%\@*%;*-"0",-63*
       %(*6%(6"&72, $*63, ()"!K4&+!D+@!??0!V5J=V4IL0!!]*X!o1.FU!S1(\9*+'*0!
1*X\1&E!W0!60E! !39*07&+*.E!O0!30!K45IJL0!D7.9/!@7\)*@7\#:$!9*7.&#&'!#&!?*.$?*:\#-*U!D.7$!7&+!
      21.;*$!12!;)7&'*0!T&!:0"0!D&'9#$)! !60>0! 8 (99#'7&!KD+$0LE!D"6%(6"&72,$'L'()*",-$.*
       9,73"9,7'60*$",-('()*"426,7'%(*K??0!M=4NL0!!"1.+.*;)%E!]*%)*.97&+$U!<?.#&'*.!
2(%(.*!2.1@!#%$!?7$%!7&+!?.*$*&\U!3!\.*&+!7&79/$#$0!!T&!W0!S0!A7..#$E!<0!`.7)7@E!_!>0!
       0.47\% LE! 0.5426, 0.7\% (0.5\% LE! 0.5426, 0.5\%): 0.5\% (0.5\%): 0.5\% (0.5\%): 0.5\% (0.5\%): 0.5\% (0.5\%): 0.5\% (0.5\%): 0.5\%
      6-'7'6, $*'002''0*K??0!J=J4L0! d 7$)#& '%1&E! " CU! 3 @*.#;7&!O$/;)191 '#;79! 3 $$1;#7\#1&0!
8 (.?)/E!00!W0E!39*O7&+*.E!00!30E! !8 (#$E!W0!S0!K45I4L0!W&1X9*+'*!7&+!F&1X#&'U!>)*!k1(.&*/!
      2.1@!?)#91$1?)/!7&+!?$/;)191'/!%1!)(@7&!9*7.&#&'0!T&!W0!S0!A7..#$E!<0!`.7)7@E!!>0!
       ,.+7&!KD+$0LE!5426,7'%(,$*&0:63%$%):*3,(4=%%@]*d%$(*0(*?3"%-""0J*6%(07-2670J*,(4*
      6-'7'6, $*'002''0!K??0!INZ=44VL0! d 7$)#& '\%1&E!" CU!3 @*.#;7&!0\$/;)191 '#;79!3\$\1;#7\\#1&0!
```

```
<; ) 799*.%E! " 0! : 0E! 3 9*O7&+*.E!O0! 3 0E! !` 1*%fE!D0!>0!KIZNNL0!T@ ?9#;#%!#&$%.(;%#1&!12!$%.7%*'#*$!21.!
              9*7.&#&'!2.1@!\*O\\\!T&!C\!D\!d *\#&\\*\#&E!D\!>\!\`1*\\fE!_!O\!3\!3\!3\!07&+*.!\KD+\\\LE!>",-('()*
              , (4*0724:*07-,7")'"0]*Z002"0*'(*,00"009"(7)*'(07-267'%(J*,(4*"#,$2,7'%(!K??0!IZJ=4IHL0!<7&!
              "#* '1U!3;7+*@#;!0.*$$Q!
(9GGB;;B9C@D\\'@>9A?;\\=CD\\39C9HA=><;\\
39*07&+*.E!00!3@! !%)*!"#$;#?9#&*+!S*7+#&'!7&+!:*7.&#&'!S*$*7.;)!:7b1.7%1./!K45I5L0!?3"*
              63, $$"()"0*%;*4"#"$%&'()*6%9&"7"(7*$'7"-,6:*'(*73"*EQ07*6"(72-:0!! d 7$)#&'\1&E! " CU!>)*!
              7\\#1\&79!3;7+\*@/!12!<;\#\&;\*\0!
              07?*.\$t7\&+t0.*\$*\&\%7\%#1\&\$()\%@9!!
39*O7&+*.E!O0! 30!K455VL0! ?3"*&, 73*7%*6%9&"7"(6"]*. *$';"0&, (*4"#"$%&9"(7, $*&"-0&"67'#"*%(*
              -", 4'()0!!07?*.!;1@@#$$#1&*+!b/!\)*!]7\\#1&79!S*7+\&'!C1&2*.*&;*0!
              39*O7&+*.E!O0!30E!O7.$1&$E!60!:0E!!]7$)E!d0!S0!KIZZVL0!?%/,-4*,*73"%-:*%;*6-",7'#7:0!
               d 7$)#&'\1&E!"CU!]7\\#1&79!3\$1;\#7\\\#1&!21.!`\#2\\*+!C)\\\#9+.\*&0!
0>@IB=E\";;F@\+DB?9A;<B>;\
39*07&+*.E!00!3(E!_!:1@b7.+#E!"0!K#&!?.*?7.7\#1&L0!]7-#'7\#&'!\)*!@(.F/!X7\*.$!12!)#')*.=1.+*.E!
              ;.#\#;79E!7&+!;.#\#;79=7&79/\\#;!\\)#&F#&'Q!g<?*;#79!T$$(*h!5426,7'%(,$*A0:63%$%):*D''#'''/0!
^97%F#&=>.1#%$;)7&$F7#7E!R0E!39*O7&+*.E!O0!30E! !O*99*'.#&1E!60!d0!K454IL0!3$$*$$#&'!#&21.@7\#1&!
              g < ?*; #79!T$$(*h!e-%(7'''-0*'(*5426,7'%(0!
: #$\text{E! 3 GE!} \ \!39\times07\times+\times.\text{E! O0! 3 0!KD+\timesL!K45 INL0!} \rangle 1X7.+!7! \@ 1+\times9!12!@ (9\\ \=\times1 (.:\times1 @ (9\\ \=\times1 + 79!)
              ?.1;*$$#&'0!g<?*;#79!T$$(*h!>", -('(')*, (4*Z(07-267'%(J*F00!
: #$\\E! 3 \(\mathreal{E}! \) 9 \(\mathreal{E}' \) 9 \(\mathreal(E' \) 9 \(\mathreal{E}' \) 9
              5426.7'%(.$*A0:63%$%)'07E!FE0!
39*07&+*.E!00!30!KD+L!K45IGL0!S*97\\#1&79!.*7$1&\#&'!\#&!<>D8!+1@7\\&$U!d)7\\!*@?\#.\#;79!.*$*7.;)!
              ;7&!;1&%.#b(%*!%1!%)*!&7%#1&79!+#791'(*0!g<?*;#79!T$$(*h!5426,7'%(,$*A0:63%$%):*D''#'''/J*
              Ef0!
39*07&+*.E!00!30!KD+0L!K45IHL0!<**F#&'!;1@@1&!'.1(&+U!3!@(9\\#+#\$;#?9\#&7./!*07@#&7\\#1&!12!
              ; .#\#; 79=7&79/\#; !\\) |#&F#& ' !#&!9*7.&#&' !7&+!+*-*91?@*&\\0!g<?*: #79!T$$(*h!5426,7'\%(',$*
             A0:63\%\%):*D''\#'''/E!Eg\emptyset!
!
```

 $3\,9*07\&+*.E!O0!\,3\,0!KD+0L!K45\,I\,JL0!!C79\#b.7\%\#\&'!;79\#b.7\%\#1\&0!C.*7\%\#\&'!;1\&;*?\%(79!;97.\#\%/!\%1!'(\#+*!))\\ @*7\$(.*@*\&\%!7\&+!;79;(97\%\#1\&!g<?*;\#79!T$\$(*h!>'',-('(')*,(4*Z(07-267'\%(J*Eb0!))))]\\ !$ 

39\*07&+\*.E!OQ!3Q!K455VLQ!d)7%!X1(9+!"\*X\*/!\$7/s!C)7&&\*9#&'!"\*X\*/!1&!%)\*!#\$\$(\*!12!%)\*! \$?\*;#2#;#%/!12!\*?#\$%\*@#;!b\*9#\*2\$u!3!S\*\$?1&\$\*!%1!8(#\$E!Y\*&+#O\*&E!7&+!A7\*.9\*!K455VLQ!

```
! a#-*$E!A(E!_!39*07&+*.E!O(!3(!K455IL(!)>*7;)#&'!7$!?*.$(7$#1&U!3!;7$*!#&!?1#&\(!?3''\%-:*'(7\%*A-,67'6''E!bPE!4H4=4H\)(*
*
```

 $6*\%1\&E!>0!:(E!\_!39*07\&+*.E!00!30!K455IL0!>)*!7\$*\$\$@*\&\%!12!\#\&\%*.*\$\%!7\&+!\%)*!;1\&\%*\&\%!7.*7!9\#\%*.7;/!\\ *\&-\#.1\&@*\&\%!C)799*\&'*\$!21.!.*\$*7.;)!7\&+!?.7;\#;*0!5426,7'\%(,\$*A0:63\%\%):*D''\#'''/J^2QH$ 

 $3\,9*07\&+*.E!\,00!\,3\,0E!\_!<\#\&\,'*.E!:0!\,8\,0!K45\,IGE!R\,;\\ \text{$^{1}$} \text{$^{1}$}$ 

!

!

!

- Y7''\*\\7E!O(E!\_!39\*07&+\*.E!O(!3(!K45IVL(!C1&;\*?\(79\f7\\f1\&!7\&+!1?\*.7\\f1\&79\\f7\\\f1\&!12!\*O\*;(\\f-\*!2(\&;\\f1\&()!T'(4J\)\*[-,'(\*,(4\)\*5426,7'%(E!QPE!I5=JJ()!
- `.1\$\$&#;F9\*E!DQ! 8 (E! " (@7\$E! " (E! 3 9\*O7&+\*.E!OQ! 3 (E! \_ !Y7 ' '\*\\7E!OQ!K45 IVLQ!T&+#-#+ (79!+#22\*.\*&;\*\$! #&!\)\*!?.1;\*\$\$!12!.\*97\\#1&79!.\*7\$1&#& 'Q!>", -('()\*, (4\*Z(07-267'\%(E!bEE!IHI=IMZQ!
- "#&\$@1.\*E! "Q!:QE!\_!39\*O7&+\*.E!OQ!3Q!K45IVLQ!3!@(9\\#+#@\*&\$\#1&79!\#&-\*\$\\#'7\\\#1&!12!+\*\*?=9\*-\*9!7&+!\$(.27;\*=9\*-\*9!?.1;\*\$\\#\\#'Q!?3"\!Y\\%2-(,\\$\%;\*5U\\&"-'9"(7,\\$\\*5426,7'\\(E!Gb\)K4LE!4IJ=4HHQ!
- :#\$\\text{ME!} 3 (\text{E!} \_ !3 9\*07&+\*.\text{E!}00! 3 (!\text{M45} I\text{IML}(!\text{D07} @ #&#& ' !.\*\\$?1&\\$\*!; 1\text{82#}+\*\text{&; \* !#\text{&!} @ (9\\text{#}?9\*!\\\*0\\!\7\\\F\\$(!! T ''7, 6\)) ('7'\('\)(\*, (4\\*>'', -('())\frac{1}{2}P\text{E!}H5G=HJV(!)!
- : 1(')9#&E!<0!8 (E!\`.1\$\$&#;F9\*E!D0!8 (E!\"#&\$@1.\*E!\"0!:(E!\\_!39\*07&+\*.E!00!30!K45IML0!!iS\*7+#&'j!

 $C)\#(\texttt{E!} < \texttt{VE!} \_ ! \ 3 \ 9*07 \& + * \ . \\ \texttt{E!OQ!} \ 3 \ \texttt{0!K45IHLQ!} \ o \ 1 \ (\& ' \, !; ) \# 9+. \\ * \& q\$! 7 \& 791 \ '\#; 79!. \\ * 7\$1 \& \#\& ' \ \texttt{U!} >) *!. 19*! 12!$ 

 $S*/\&19+\$E!S(!D(E!<;)799*.\&E!"(!:(E!\_!39*O7\&+*.E!O(!3(!K455ZL(!3\&!7\%97\$!)7\$!@1.*!\%)7\&!1\&*!@7?U!3!)$ 

%

- 8 (.?)/E!OQ!WQE!\_!39\*O7&+\*.E!OQ!3Q!K4554LQ!d)7%!;1(&\\$s!>)\*!?.\*+#;\\#-\*!?1X\*.!12!\\$(bk\*;\\=@7\\\\*.! F&1X9\*+'\*E!\\.7\\\*'#;!?.1;\*\\$#&'E!7&+!#&\\\*.\*\\!#&!+1@7#&=\\$?\*;#2#;!?\*.21.@7&;\*\\!Y\\\2-(,\\$\*\\,\*\\$5U&''-'9''(7,\\$\*5426,7'\\(J\\$G5E!IZG=4IHC\)\*
- Y(\*)9E! 8 Q! 8 QE! 3 9\*07&+\*.E!OQ! 3 QE! 8 (.?) /E!OQ!WQE!\_!<?\*.9E!CQ!>Q!K455ILQ!O.12#9#&'!?\*.\$(7\$#1&U!>)\*!
  .19\*!12!b\*9#\*2\$E!F&1X9\*+'\*E!7&+!#&\\*.\*\$\|!\&\!\)\*!?.1;\*\$\$#&'!12!?\*.\$(7\$#-\*!\\\*O\\!\\)7\\!-7./!b/!
  7.'(@\*&\|\$\\.(;\\(.\*\)!Y\\2-(,\\$\%;\\*>'7"-,6:\*D"O",-63J\\HHE!4VZ=J5IC!
- $6*\%1\&E!>0!:0!!_!39*07\&+*.E!00!30!K4551E!6(9/L0!:*7.\&\#\&'!2.1@!\%*0\%!3!@(9\#+#@*\&$#1&79!7\&+!+*-*91?@*\&\%79!?*.\$?*;\#-*\!3&!*0*;(\\#-*!\$(@@7./0!D'',4'()*B(M>'(''0!)) \\%?\![[XXX\0.*7+\#&'1&\9\#\&*\01.'[7.\\#;9*\$[7.\\t\#\&+*0\07\$?$ASDa|[7.\\#;9*\$[)7&+b11F[k*\\\1&[\#\&+*0\0]) \\@9!$

!

!

!

!

!

!

!

!

- d )#%\*E!CQ!<QE! 3 9\*O7&+\*.E!OQ! 3 QE!\_!"7(')\*.\%/E! 8 Q!KIZZNLQ!>)\*!.\*97\\#1&\$)#?!b\*\\X\*\*&!/1(&'!;)#9+.\*&p\$!7&791'#;79!.\*7\$1&#&'!7&+!@7\\)\*@7\\#;79!9\*7.&#&'Q!\T,73"9,7'6,\$\*+\%)('7'\%(J\*b\K4LE!\I5J=I4JC!
- 6\*\\1&E!>0!: (E!\_!39\*07&+\*.E!O0!30!KIZZGL0!T&\\.(;\\#1&79!\#@?1.\\7&;\*\U!d)7\\!\\\*7;)\*.\$!-79(\*!7&+!X)7\\!
  \$\\(+\*&\\\$!9\*7.&\(0!D'', 4'()\^D''0'', -63\\2, -7''-\\$: J\\*HEE!4Z5=J5\N0!
- $3\,9*07\&+*.E!O0!\,3\,0E!\,8\,(.?)\,/E!O0!W0E!\,\_!\,d\,11+\$E!Y0!<0!KIZZGL0!\,,\,\&*7.\$)\,\#\&\,'\,!7\,;7+*@\#;!.\,1\,1\$\$U!D+(\,;7\$1.\$p!\,,\,.;*?\$#1\&\$!\,12!\$)*!\$\$*..*97\$#1&\$)\#?!\,12!?)#91\$1?)/E!?\$/;)\,191'/E!7\&+!*+(\,;7\$#1&0!5426,7'\%(\,,\,\$*e\%-2\,9\,J^*g_0E!\,IG4=INV0!$
- 39\*07&+\*.E!OQ!3 (E! 8 ( .? ) /E!OQ!W()E! d 11+\$E!Y()!<(E! " ( ) 1&E!W()!D()E!\_!O7.F\*.E! " ()!KIZZGL()!C199\* '\*! #&\$%.(;\#1&!7&+!;1&;1@#\%7&\!;)7& '\*\$!#&!\$\(+\*&\\$p!F&1X9\*+ '\*E!#&\\*.\*\$\\E!7&+!\$\\.7\\\*' /!(\$\*U!3!\$\\(+/!12!+1@7#&!)\*7.&#& '()!+\%(7"9&\%-,-:\*5426,7'\%(,\\$\*A0:63\\%)):J\*EE!14M=IHVC!
- 39\*07&+\*.E!O(!3(E!\_!6\*\\1&E!>(!:(!KIZZVL(!>)\*!.19\*!12!#@?1.\\7&;\*!7&+!#&\\\*.\*\$\\!#&!\\)\*!?.1;\*\$\$#&'!12!\\\*\*O\()!5426,7'\((,\\$^20.63\\\$\)):\*D'\'#'''/J\*GKILE!NZ=I44(!
- $3\,9*07\&+*.E!O(!\,3\,(E!6*\%1\&E!>(!\,:\,(E!\_!W\,(9\#F1X\#;\,)E!6(!\,8\,(!KIZZML(!T\&\%*...*97\%1\&\$)\#?!12!F\&1X9*+'*E!\#\&\%*.*\$\%E!7\&+!.*;799U!\,3\,\$\$*\$\#\&'\,!7!@\,1+*9!12!+1@\,7\#\&!9*7.\&\#\&'\,(!Y\%2-(\,,\,\$\%;*5\,426\,,\,7'\%(\,,\,\$*A0:63\%\%)\,:J*GOE!MMZ=MGM(!$
- "1;)/E!a(!6(!S(!C(E!\_!39\*07&+\*.E!0(!3(!KIZZML(!87??#&'!?.#1.!F&1X9\*+'\*U!3!2.7@\*X1.F!21.!+#\$;(\$\$#1&!7@1&'!.\*\$\*7.;)\*.\$(!52-%&'',(\*Y%2-(,\$\*%;\*A0:63%\$%):\*%;\*5426,7'%(J\*hE!44M=4H40!
- d 7+\*E!<(!D0E! 3 9\*07&+\*.E!00! 3 0E!<; ) .7XE! ` (E! \_ !W (9#F1X#; ) E!60! 8 (!KIZZML0!>) \*!?\*.#9\$!12!; .#\#;#\$@U! S\*\$?1&\$\*!\1! ` 1\*\f!7&+!<7+1\$F#(!D", 4'()\*D"0", -63\*\2, -7"-\$:J\*HPE!MI4=MIM0\*
- $3\,9*07\&+*.E!00!\,3\,(E!\_!"\,1;\,)\,/E!\,a0!60!\,S\,(!C0!K\,I\,Z\,Z\,ML0!C\,1\&\,;\,*\,?\,\%\,1\&\,\$!\,1\,2!\,F\&\,1\,X\,9*+\,'\,*\,!\,7\&\,+\,!\,b*\,9\#*\,2\$\,U!\,3\,!\,;\,1\,@\,?\,7\,.\,\#\,1\&\,?\,;\,1\,\&\,?\,?\,.\,\#\,1\&\,?\,;\,1\,@\,(\&\,\#\,\#\,*\,\$\,0!\,.\,9\,"\,-\,'\,6\,,\,(\,*\,5\,4\,2\,6\,,\,7\,\%\,(\,\,,\,\$^*\,D\,"\,0\,"\,,\,-\,6\,3^*\,Y\,\%\,2\,-\,(\,\,,\,\$^*\,H\,E\,E!\,H\,I\,J\,=\,H\,H\,4\,0^*$

 $39*07\&+*.E!00!30E!d#9$1\&E!30!a0E!d)#**E!C0!<0E!d#99$1&E!\0!:0E!>799*&*E!80!W0E!_!<)(**$E!S0!D0!)$ 

```
` 7.&*.E!S(\text{\text{E!}} \cdot \text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\t
```

```
39*07&+*.E!0Q!3Q!KIZNJE!67&(7./LQ!3!]*X!o*7.4$!.*$19(\\#1&!K`(*$\\!D+\#\1.\#79LQ!?",63"-*5426,7'\%(*
                   A-\%)-, 9*e\%\%\%/MX&*<724'''0*8''/0$''77''-0!
39*07&+*.E!00!30!KIZNIL0!A-"4'67'#"*,662-,6:*%;*73'-4*,(4*;';73*)-,4"-0*,6-%00*$'()2'07'6*,(4*
                    (\%(\$'()2'07'6*6\%9\&-"3"(0'\%(*9",02-"0]*?3"*-"\$,7'\%(03'\&*="7/""(*\&"-;\%-9,(6"*\%(*9",02-"0))*?3"*-"\$,7'\%(03'\&*="7/""(*\&"-;\%-9,(6"*\%(*9",02-"0))*?3"*-"$,7'\%(03'\&*="7/""(*\&"-;\%-9,(6"*\%(*9",02-"0))*?3"*-"$,7'\%(03'\&*="7/""(*\&"-;\%-9,(6"*\%(*9",02-"0))*?3"*-"$,7'\%(03'\&*="7/""(*\&"-;\%-9,(6"*\%(*9",02-"0))*?3"*-"$,7'\%(03'\&*="7/""(*\&"-;\%-9,(6"*\%(*9",02-"0))*?3"*-"$,7'\%(03'\&*="7/""(*\&"-;\%-9,(6"*\%(*9",02-"0))*",2"*-"$,7'\%(03'\&*="7/""(*\&"-;\%-9,(6"*\%(*9",02-"0))*",2"*-"$,7'\%(03'\&*="7/""(*\&"-;\%-9,(6"*\%(*9",02-"0))*",2"*-"$,7'\%(03'\&*="7/""(*\&"-;\%-9,(6"*\%(*9",02-"0))*",2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$,2"*-"$
                    )-, 42, 7"4*&, 00, ) "*N2"07"%(0*2(4"-*$'07"('()*, (4*-", 4'()*6%(4'7'%(0*, (4*73"*<7, (4, -4*
                   A-\%) - "00" #"* T, 7- '6" 00!, &? (b9#$) *+!+1; \\1.79!+#\$*.\\7\\#1\&0!, \&\#-*.\$\#\/!12! \\8 7./97\&+0!
&'+0+)#$#".)0%
"C?@AC=?B9C=E\\ ) = ?B9C=E\\ T @QC9?@;\\=CD\\"CKB?=?B9C=E\\#=E:;\\
39*07&+*.E!00!30!K4544E!]1-*@b*.L0!>",-('(')*7%*$",-(*";;"67'#"$:*'(*7%4,:m0*3:&"-6%(("67"4*
                    /%-$4]*500"(7', $*07-, 7") '"0*;%-*0724"(70*, (4*7", 63"-00!a1(.\!))!T&\!*.&7\!\#1&79!C1&2*..*&;*!1&!
                    ] *X!^*797&+()!
39*07&+*.E!00!30!K4544E!3('($\L0!<@'\$J*/'\$J*, (4*73-'\$)\X(4"-07, (4'()*73"*6\%9&\$"U*'(7"-&\$,:*\%;*
                   6%)('7'%(J*9''7,6%)('7'%(J*, (4*9%7'#,7'%(*'(*$",-('()*, (4*4"#"$%&9"(70!W*/&1\\*!
                   +*9#-*.*+!7%!%)*!@**%#&'!12!D(.1?*7&!3$$1;#7%#1&!21.!S*$*7.;)!1&!:*7.&#&'!7&+!
                   T\&\$\%.(; \#1\&E!< T^!N! _ IV!61\#\&\$!C1\&2*.*\&; \#0.2412(2Tm/0,0.2,914,0.2,914,0.2,914,0.2,914,0.2)
```

```
39*07&+*.E!00!30E! !:*-#&*E!S0!K454IE!6(&*L0!<266"00;2$*,6,4"9'6*&2=$'03'()]*.*)$%=,$*
            &"-0&"67'#"0!T&-#\*+!1&9\&*!X1.F\$)1?!7\\!\)*! d 1.9+!D+(;7\\#1&79!S*\$*7.;)!C1&2*.*&;*0!
39*O7&+*.E!O0!30!KO7&*9#$\L!K454IE!3?.#9L0!S%/*03%2\$4*/''*(,#'),7''*\&"(*06'''(6''*'(*''426,7'\%(,\$*
            -"0", -63n^*/ -, "(07\%-9")/"(3\%)/"(4""-0,7")/"(34"=,7")/"(4*\&-\%=$"9)/"(9)/"(1)/"(1)/"(1)/"(2)/"(3)/"(3)/"(4*&-\%=$"9)/"(3)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)/"(4*&-\%=$"9)
            %)*!-#.%(79!7&&(79!@**\#&'!12!\%)*!3@*.#;7&!D+(;7\\#1&79!S*\$*7.;)!3\$\$1;#7\\#1&0!
39*07&+*.E!00!30!K454IE!67&(7./L0!?3"*&%/"-*%;*&,77"-(0*'(*73'(@'()*,(4*-",0%('())!T&-#\*+!
            9*;\(.*!21.!\)\*!D.&1!:*\\\\&\!R&\\!R&\\!R\\!D191e(#(@!<*.#*\$E!, &#-*.\\\|/!12!>(.F(E!a#&\)7&+0!
39*07&+*.E!00!30!K4545E!6(&*L0!>)*!&(\$!7&+!b19\$!12!7;7+*@#;!?(b9\#$)#&'0!T&!00!30!39*07&+*.!
            KR.'7\% f^*.LE!S\%/7\%)''7\%2=\$'03''40! +*1!X1.F\$)1?!21.!\%)*!3@*.#;7\&!D+(;7\#1\&79!)
            S*$*7.;)!3$$1;#7\\#1&0!
39*07&+*.E!00!30!K]1-*@b*.E!45IZL0!S%/*7%*0266""4*,7*,6,4"9'6*&2=$'03'()0!>)*!3DS3=]<a!
             .7&\$!0.1'.7@E!a799!C1&2*.*&;*0! d 7$)#&'\1&E!''C0!
39*07&+*.E!00!30!K]1-*@b*.E!45IZL0!A$:'()*73"*7%%$0*%;*,6,4"9'6*&2=$'03'()]*?3"*(270*,(4*=%$700!
            39*07&+*.E!00!30!K45IZE!R;\1b*.L0!?3"\*k(\(\(\)(\)09,-71\*20"\*\\;\*09,-7\*7"\63(\(\)\\\\)\)'"0]\*?3"\*(\(''/\*4')\'7,\\)\*
            4'#'4''*;%-*7%4,:j0*'^'(''-,7'%(0!>*..7?#&>79F!21.!\))*!I55!"=/*7.!;*9*b.7\\\\\)*!C199*'*!
            12!D+(:7\\#1&E!.&#-*.\$#\\/!12!87.\\97&+0!
39*07&+*.E!00!30!K45IZE!R;\%1b*.L0!D"4";'('()*\$'7"-,6:\*;\%-\*,\$\$'(\*73"\*EQ07\*6"(72-:]\*?3"\*("U20\*\;\*)
            7"U7J*6-'7'6, $*73'(@'()J*, (4*7"63(%$%):Q!A*9'*!D&'!T&-#\*+!:*;\(.*E!, &#-*.$#\/!12!R$91E!
            R$910!
39*07&+*.E!00!30E! !:*-#&*E!a0!K45IZE!6(9/L0!>%%@'()*)$%=,$$:*,7*73''*&2=$'6,7'%(*&-%6''000* %-$4*
             5426,7'%(,$*D"0",-63*.00%6',7'%(0!>1F/10!
39*07\&+*. E!00! 30! K45 IZE! 6( \&*L0! c (\%/\$''4)'''*, (4*73'''*' \land ''(''-,7'\%(]*?3''*'' \&'07'' 9'6*6\%(0''N2''(6''0*\%;*))))
            $'#'()*, (4*$",-('()*'(*73"*4')'7,$*,)"0!T&-#\\*+!?.*$*&\7\\#1&!7\\!\)\*!IN\)!T&\\*.&7\\#1&79!
            W&1X9*+'*!7&+!<?7;*!</@?1$#(@!1&!i0.12*$$#1&$!7&+!0.12#;#*&;/Ej!A*#+*9b*.'E!
             `*.@7&/Q!
39*07&+*.E!00!30!K45IZE!6(&*L0!?3"*'^"("-,7"%(*,(4*$"7"-,6:*'(07-267"%(]*?",63'()*,(4*$",-('()*
             '(*73''*, )''*%;*#'-72,$*-'',$'7:J*0%6',$*9''4',J*,(4*;,@''*(''/00!T&-#\\*+!?.*\$*&\\7\\\\1\&!7\\\\)*!
            W*/$%1&*!<\%7%*!:#\%.7;/!3$$1;#7\\#1&!:*7+*.$)#?!d1.F$)1?E!<\\7\\*!C19\*'*E!O30!!
39*07&+*.E!00!30!K45IZE!3?.#9L!KC)7#.["#$;($$7&\LQ!Z((\%#,7\%(0\*'(\*\",-(\'())\*.\*/\%-\$4/\'4\"\*
            &"-0&"67'#"0!T&-#\*+!$*$$#1&!21.!\)*! d 1.9+!D+(;7\#1&79!S*\*7.;)!3\$1;#7\#1&!7\!\)*!7\&(79!
            @**\#&'!12!\)*!3@*.#;7&!D+(;7\\#1&79!S*\$*7.;)!3\\$1;\#7\\#1&E!>1.1&\\10!
!
```

```
39*07\&+*.E!00!30!K45IGE!3?.\#9L0!!>)*!\&(\%\$!7\&+!b19\%\$!12!7;7+*@\#;!?(b9\#\$)\#\&'0!T\&!00!30!39*07\&+*.!KR.'7\&\#f*.L0!S\%/*7%*)''7*&2=\$'03''40!!d1.F\$)1?!?.*\$*\&\%*+!7\%!\%)*!7&&(79!@**\\#&'!12!\\)*! <math display="block">3@*.\#;7\&!D+(;7\%\#1\&79!S*\$*7.;)!3\$\$1;\#7\%\#1\&E!<7\&!3\&\%1\&\#10!!! 39*07\&+*.E!00!30!K45IGE!3?.\#9L0!
```

```
39*O7&+*.E!O0!30!K45IJE!3?.#9L!K"#$;($$7&\L0!>)*!#&\\*99#'*&;*!12!.*97\\#1&79!.*7$1&\#&'0!!T&!d0!
       <97%*.!_!S0!A1.1X#%f!KC)7#.$LE!?3"*,00"009"(7*%;*-,7'%(,$*73'(@'())*Z\*p*D\(**
       ! '07'()2'03"4*<63%$, -*<: 9 &%0'29*'(*S%(%-*%;*c"'73*50*<7, (%#'63E!<?1&$1.*+!b/!\)*!
       3DS3!<T`U!S*$*7.;)!#&!S*7+#&'!7&+!:#\\*.7;/E!3@*.\#;7&!D+(;7\\\#1&79!S*\$*7.;)!
       3$$1;#7\\#1&E!<7&!a.7&;\#$;10!
39*07&+*.E!00!30!K45IJE!3?.#9L!K"#.*:\1.L0!S\(\sigma\)/7%\(2=\sigma\)/3"4]*\2'4,(6"*;-\(9\)*"9"-)'()*,(4*
       0''(''-*063\%, -0)!!0.12*$$#1&79!"*-*91?@*&\!d1.F$)1?!21.!\)*!3@*.\#;7&!D+(;7\\#1&79!")*!3
       S*$*7.;)!3$$1;#7\\#1&E!<7&!a.7&;\#$;10!
39*07&+*.E!00!30!K45IJE!a*b.(7./L0!!Z(;%-9,7'%(*9,(,))"9"(7*#"-020*@(%/$"4)"*=2'$4'()]*
       +3, $$"()"0*;%-*7", 63'()*, (4*$", -('()*'(*73"*EQ.*6"(72-:0!!T&-#\*+!7++.*\$\!7\!\ 87./!:1(!
       a(9\|1\&!>*7;)*.\$!C199*'*E!3.\#f1\&7!<\|7\|*!,\&\#-*.\$\#\/E!>*@?*0!
39*07&+*.E!00!30!K45I4E!<*?\%@b*.L0!!D"\$,7'\%(,\$*-",0\%('()\*,(4*6\%(6"\&72,\$*63,()"]\*+\%2&\$'()\*
       \&"-6"\&7*, (4*6\%(6"\&7*'(*6\%9\&\$"U*2(4"-07,(4'())0)!W*/&1\*!7++.*$$!?.*$*&\*+!7\!\))*!
       D(.1?*7&!3$$1;#7\#1&!21.!S*$*7.;)!1&!:*7.&#&'!7&+!T&$\.(;\#1\&p$!N\))!T\&\*.&7\\#1\&79!
       C1&2*.*&;*!1&!C1&;*?\((79!C)7&'*E!>.\(\pi^*.E!\)^*.\(\@7\&/0!\)!
39*07&+*.E!00!30!K45I4E!6(9/L0!!X($%6@'())*73"*0"6-"70*7%*,6,4"9'6*&2=$'03'()0!!T&-#\*+!7++.*$$!7\!
       %)*!, &#-*.$#\/!12!3(;F97&+E!3(;F97&+E!]*X!^*797&+0!
39*07&+*.E!00!30!K45I4E!6(9/L0!!X($%6@'()*73"*0"6-"70*7%*,6,4"9'6*&2=$'03'())c*T&-#\*+!7++.*$$!7\!
       %)*!\#;%1.#7!, &#-*.$#%/E! d *99#&'%1&E!]*X!^*797&+0!
39*07&+*.E!00!30!K45I4E!3?.#9L!K"#.*:\1.L0!S%/*7%*)"7*&2=$'03"4]*^2'4.(6"*:-\99*"9"-)'()*.(4*
       0"('%-*063%$, -00!!0.12*$$#1&79!"*-*91?@*&\\! d 1.F\$)1?!21.!\\)*!3 @*.#;7&!D+(;7\\\1879!
       S*\$*7.;)!3\$\$1;\#7\%\#1\&E! \setminus 7\&;1(-*.E!C7\&7+70!
39*07&+*.E!00!30!K45I4E!87.;)L0!e,6'()*73"*63,$$"()"0*%;*7",63'()*,(4*$",-('()*'(*73"*E0*
       6"(72-:0!!T&-#\*+!7++.*$$!7\!, &#-*.$#+7+!3(\\n&1@7!+*!87+.#+E!<?7#&0!
39*07&+*.E!00!30!K45I4E!87.;)L0!!?3"*-",$'7"'0*%;*$",-('(')*,(4*7",63'(')*'(*73"*EQ *6"(72-:U!
       : *7.&#&'!X#%)!8 (9%#@*+#7!87%*.#79$!#&!a1.@79!7&+!T&21.@79!C1&%*O\$E!87+.#+E!<?7#&0!
39*07&+*.E!00!30!K45I4E!a*b.(7./L0!!D",4'()*'(7%*73"*;272-"]**?3"*63,$$"()"0*%;*6%9&"7"(7*
       $'7''-, 6:*:%-*73''*E007*6''(72-:0!!`.7+(7\\*!<\(+\*&\\!3\$1;\\#7\\\#1\&E!,\&\\+*.\\\\\!12!\\11.\\)!
       C7.19#&7E!C)7?*9!A#990!
39*O7&+*.E!O0!30!K45I4E!a*b.(7./L0!!c(%/$"4)"*=2'$4'()*#"-020*'(;%-9,7'%(*9,(,)"9"(7)**
       +%(;-%(7'()*73"*63, $$"()"0*%;*7", 63'()*, (4*$", -('()*'(*73"*E0 *6"(72-:0!!C*&\\*.121.!
       >*7;)#&'!7&+!:*7.&#&'!D&)7&;*@*&\\[\(\)!:7\@7.!,\&\(\)#-*.\\\\\[\)#\\\[\]E!Y*7(\@1\&\\\\]!>c\[\]!
39*07\&+*.E!00!30!K45I4E!a*b.(7./L0!!_3,7*Z*3,#''*$'',-("4*'0%*;,-a0!!0.*$#+*&\#79!3++.*$$!7\\\)*!
       7&&(79!@**\#&'!12!\)*!<1(\)X*$\\D+(;7\\#1&79!S*$*7.;)!3$$1;#7\\#1&E!]*X!R.9*7&$0!
```

! 39\*07&+\*.E!0Q!3Q!K45IIE!]1-\*@b\*.LQ!\2"07'%(\*,0@'()\*,(4\*329,(\*'(7"(7'%(,\$'7:Q!W\*/& !

```
39*07&+*.E!00!30!K455JE!3('($\L0!5U&"-7'0"\*, (4\*, 6, 4"9'6\*4"\#"\$\\&9"(7]\*.\*("/\*\&"-0\&\"67'\#\"\*\((\*, \*)
                                             6$, 00'6*73"9"0!W*/&1\\dagge*!7++.\dagge*$!?.\dagge*$\dagge*$\dagge*$!?.\dagge*$\dagge*$!?!\dagge*$!?!\dagge*$!?!\dagge*$!!12!\\dagge*$\dagge*$!!12!\\dagge*$!!12!\\dagge*$!!12!\\dagge*$!!12!\\dagge*$!!12!\\dagge*$!!12!\\dagge*$!!12!\\dagge*$!!12!\\dagge*$!!12!\\dagge*$!!12!\\dagge*$!!12!\\dagge*$!!12!\\dagge*$!!12!\\dagge*$!!12!\\dagge*$!!12!\\dagge*$!!12!\\dagge*$!!12!\\dagge*$!!12!\\dagge*$!!12!\\dagge*$!!12!\\dagge*$!12!\\dagge*$!!12!\\dagge*$!12!\\dagge*$!!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge*$!12!\\dagge**$!12!\\dagge**$!12!\\dagge**$!12!\\dagge**$!12!\\dagge**$!12!\\dagge**
                                               39*07&+*.E!00!30!K4554E!"*;*@b*.L0!A-%;'$'()*73"*4"#"$%&'()*-",4"-]*?3"*'(7"-&$,:*%;*
                                              @(\%/\$''4)''J^{*'}(7''-''07J^{*},(4*07-,7'')'6*\&-\%6''00'())!>)*!R\$;7.!C7(\$*/!S*\$*7.;)!3X7.+!
                                              39*07\&+*.E!00!30!K4554E!11-*@b*.L0!<7-,7")'"0]*_3,7*,-"*73":*,(4*3%/*4%*73":*4"#"$%&n!
                                              0.*\$ * \& \% 7 \% * 1 \& ! 7 \% ! \% ) * ! T \& \% * . \& 7 \% * 1 \& 7 9 ! S * \$ * 7 . ; ) ! C 1 \& 2 * . * \& ; * ! 1 \& ! a \# . \$ \% ! 7 \& + ! < * ; 1 \& + ! : 7 \& ' (7' * ! ) ! C 1 \& 2 * . * \& ; * ! 1 \& ! a \# . \$ \% ! 7 \& + ! < * ; 1 \& + ! : 7 \& ' (7' * ! ) ! C 1 \& 2 * . * \& ; * ! 1 \& ! a \# . \$ \% ! 7 \& + ! < * ; 1 \& + ! : 7 \& ' (7' * ! ) ! C 1 \& 2 * . * \& ; * ! 1 \& ! a \# . \$ \% ! 7 \& + ! < * ; 1 \& + ! : 7 \& ' (7' * ! ) ! C 1 \& 2 * . * \& ; * ! 1 \& ! a \# . \$ \% ! 7 \& + ! < * ; 1 \& + ! : 7 \& ' (7' * ! ) ! C 1 \& 2 * . * \& ; * ! 1 \& ! a \# . \$ \% ! 7 \& + ! < * ; 1 \& + ! : 7 \& ' (7' * ! ) ! C 1 \& 2 * . * \& ; * ! 1 \& ! a \# . \$ \% ! 7 \& + ! < * ; 1 \& + ! : 7 \& ' (7' * ! ) ! C 1 \& 2 * . * \& ; * ! 1 \& ! a \# . \$ \% ! 7 \& + ! < * ; 1 \& + ! : 7 \& ' (7' * ! ) ! C 1 \& 2 * . * \& ; * ! 1 \& ! a \# . \$ \% ! 7 \& + ! < * ; 1 \& + ! : 7 \& ' (7' * ! ) ! C 1 \& 2 * . * \& ; * ! 1 \& ! a \# . \$ \% ! 7 \& + ! < * ; 1 \& + ! : 7 \& ' (7' * ! ) ! C 1 \& 2 * . * \& ; * ! 1 \& ! a \# . \$ \% ! 7 \& + ! < * ; 1 \& + ! : 7 \& ' (7' * ! ) ! C 1 \& 2 * . * \& ; * ! 1 \& ! a \# . \$ \% ! 7 \& + ! < * ; 1 \& + ! : 7 \& ' (7' * ! ) ! C 1 \& 2 * . * \& ; * ! 1 \& ! a \# . \$ \% ! 7 \& + ! < * ; 1 \& + ! : 7 \& ' (7' * ! ) ! C 1 \& 2 * . * \& ; * ! 1 \& ! a \# . \$ \% ! 7 \& + ! < * ; 1 \& ! a \# . \$ \% ! 7 \& * . * \& ? \% ! A \% ! A
                                               :#%*.7;/!<%.7%*'#*$E!C199*'*!07.FE!8 "0!
39*07&+*.E!00!30!KO.*$*&\*.[A1&1.**L0!K4554E!3?.#9L0!D",63*;%-*73"*07,-00!T&-#\*+!$*$$#1&!12!\)*!
                                              3 @*.#;7&!D+(;7\\dagge1&79!S*\dagge*7.;)!3 \dagge\dagge1;\dagge1\\dagge\dagge1 \dagge1 \dagge1 \dagge1.
39*07&+*.E!00!30!K4554E!67&(7./L0!?3"*07-2))$'()*,4%$"06"(7*-",4"-]*.*("/*&"-0&"67'#"*%(*,(*
                                               "(42-'()*\&-\%=\$"90!W*/\&1\%*!?.*\$*\&\%*+!7\%!\%)*!3+19*\$;*\&\%!:\#\%*.7;/!d1.F\$)1?!\$?1\&\$1.*+!b/!
                                             \label{eq:continuous} \begin{subarray}{ll} \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$ & \$/\$
39*07&+*.E!00!30!K455IE!3('($\L0!Z(\display3''\display:'', -\displayEPEP]\display5(\display0'\widehata'('()\display3''\display\display00'='\display7'''0\display,\display-\display1''\display\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3''\display3
                                              &0:63%%%):0!0.*$#+*&\#79!3++.*$$E!"#-#$#1&!IME!?.*$*&\*+!7\!\\)*!7&&(79!@**\#&'!12!\)*!
                                               3 @*\#&'!1Tc mBT505Tf[(@)0.2(*)(")0.2(0)-0.2-0.2(')0.2(\(\(\)\'\)0.2(()*7)0.2(3")0.2(*&\(\)0)9&'!12!\
```

```
39*07&+*.E!00!30!KIZZVE!6(&*L0!5(-'63'()*73"*4',$%)2"*="7/""(*6%)('7'%(*,(4*92$7'62$72-,$*
       "426,7%(]*<3,-"4*73"9"0*%;*@(%/$"4)"J*6%(6"&72,$'L,7'%(J*6%9&$"U'7:J*0'72,7'#'7:J*,(4*
       '(4'#'42,7'%(0!T&-#\*+!7++.*\$\!?.*\$*&\*+!7\\!\)\*!]7\\#1&79!C1&2*.*&;*!1&!3;)\#*-#&'!
       3;7+*@#;!D0;*99*&;*!#&!R(.!8(9\\#;(9\\(.79!<;))119E!d7\$)#&'\\1&E!"C0!
39*07\&+*.E!00!30!KIZZME!67\&(7./L0!!\%9,'(*\$",-('('))*T,\&\&'(')*73"*92\$7'4'9"(0'\%(',\$*\$,(406,\&"0!)*73"*92\$7'4'9")
       T\&-\#h^*+!O.*\$\#+*\&h\#79!3++.*\$\$0!3\&\&(79!@**\#\&'!12!h)*!<1(h)X*\$h!D+(;7h\#1\&79!S*\$*7.;)!
       3 \$1; \#7\%\#1\&E! "7997\$E! > c 0!!
39*07&+*.E!00!30E!_!8 (.?)/E!00!W0!KIZZHE!3?.#9L0!>)*!.*$*7.;)!b7$*!21.!303p$!:*7.&*.!C*&\\*.*+!
       O.#&;#?9*$Q!T&!YQ! 8;C1@b$!KC)7#.LE!?,@'()*-"0",-63*%(*$",-('()*0"-'%20$:]*Z9&$'6,7'%(0*
       ;%-*7", 63"-*"426, 7'%(0!T&-#\*+!\$/@?1\$#(@!;1\&+(;\\*+!7\\\\))*!7\&\&(79!@**\\#\&'!12!\\)*!
       3 @*.#;7&!D+(;7\\#1&79!S*\$*7.;)!3 \$\1;\#7\\\#1&E!]*X!R.9\*7&\$\0!
39*07&+*.E!00!30!KIZZHE!3?.#9L0!>",-('()*07-,7")'"0J*92$7'&$"*'(7"$$')"(6"J*0%6',$*
       6%(07-267'#'09CC 3,7*'0*,*7",63"-*7%*4%n!T&-#\*+!\\#;*=0.*\$#+*&\\#79!C1&-*.\$7\\#1&!
       K"#-#$#1&!WL!?.*$*&%*+!7%!%)*!7&&(79!@**\#&'!12!\%)*!3@*.#;7&!D+(:7\\#1&79!S*$*7.;)!
       3$$1;#7\\#1&E!]*X!R.9*7&$0!
39*07&+*.E!00!30E!_!W(9#F1X#;)E!60!80!KIZZ4E!3?.#9L0!
```

```
 3 \%07\& + *.E!00! 3 \% K45 IZE! 3 ('(\%L!KC)7\#.LQ!>'', -('()*; -\%9*92\$7'\&\$''*4\%629''(70*, (4*92\$7'\&\$''**-''\&-''0''(7,7'\%(00!</e>***&\pi*+!7\\pi*!\pi*+&&\#79!@**\pi#&\pi*!\pi*!\pi(.1?*7&!)*!\pi(.1?*7&!)*!\pi(.1?*7&!)*!\pi(.1?*7&!)*!\pi(.1?*7&!)*!\pi(.1?*7&!)*!\pi(.1?*7&!)*!\pi(.1?*7&!)*!\pi(.1?*7&!)*!\pi(.1?*7&!)*!\pi(.1?*7&!)*!\pi(.1?*7&!)*!\pi(.1?*7&!)*!\pi(.1?*7&!)*!\pi(.1?*7&!)*!\pi(.1?*7&!)*!\pi(.1?*7&!)*!\pi(.1?*7&!)*!\pi(.1?*7&!)*!\pi(.1?*7&!)*!\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1)**\pi(.1.1
```

```
3\,9*07\&+*.E!O(!\,3\,(!K\,45\,INE!\,3\,?.\#)L(!K\,"\,\#\,;\,(\,\$\,7\&\,L(!\,S\,*\,7\,+\,\#\,\&\,'\,!\,\#\,\&\,!\,)\,*\,!\,+\,\#\,'\,\#\,7\,!\,?\,?\,?\,?\,*\,U!CR\,8\,8\,3\,]\,"\,E!\\ CR\,\,]\,>\,SR\,:\,E!\,7\&+\,!D\,<\,C\,3\,0D(!T\&\,!6(!\,8\,(!W\,(\,9\#F\,1X\#\,;\,)\,!K\,C\,)\,7\#\,.LE!\,D''\,,\,4'\,(\,\,)\,*'\,(\,*\,7\,3''*\,4'\,)\,'\,7\,,\,\$^*\,,\,)\,''\,J^*\,.\,;\,;\,%\,-\,4\,,\,(\,6''\,0^*\,,\,(\,4^*6\%\,(\,0''\,N\,2''\,(\,6''\,0^*\,;\,\%\,-\,\$''\,,\,-\,(\,'\,(\,\,)\,J^*R\,2\,4\,)\,9\,''\,(\,7\,J^*\,,\,(\,4^*\&\,"\,-\,;\,\%\,-\,9\,,\,(\,6''\,0!\,<\,/\,@\,?\,1\,\$\#\,(\,@\,!\,2\,.\,\$^*\&\,\$^*\,+\,!\,?\,\$^!\,\$^*\,)\,*\,!\,?\&\,(\,7\,9\,!\,@\,*\,*\,\$\#\&\,'\,!\,1\,2\,!\,\$^*\,)\,*\,!\,3\,\,@\,*\,.\,\#\,;\,7\,\&\,!D\,+\,(\,;\,7\,\$\#\,1\,\&\,7\,9\,!\,S\,\,*\,\$^*\,7\,.\,;\,)\,!\,3\,\,\$\,1\,;\,\#\,7\,\$\#\,1\,\&\,E!\,]\,\,*\,X\,!\,o\,1\,.\,F(!\,)\,
```

 $39*07\&+*.E!00!30!K45INE!3?.\#9L0!K"\#\$;(\$\$7\&\%L0!:*7.\&\#\&'!7\&+!@\#\$;1\&;*?\%\#1\&\$0!T\&!30!Y(\%9*.!KC)7\#.LE!\\D"426'()*73"*'9\&,67*\%;*9'06\%(6"\&7'\%(0))$ 

```
. 1$$&#;F9*!O*\*.$1&E!D0E! !39*O7&+*.E!O0!30!K45IGE!3?.#9L0!C(.#1$#\/!7&+!#&\*.*$\\0!!T&!30!
      S*&&#&'*.!KC)7#.LE!5U&$%-'()*73''*=%2(4,-'"0*%;*62-'%0'7:*,(4*'(7"-"070!</@?1$#(@!
      ?.*$*&%*+!7\%!\%)*!7&&(79!@**\%#&'!12!\%)*!3@*.#;7&!D+(;7\\#1&79!S*\$*7.;)!3\$1;#7\\#1&E!<7&!
      3 & % 1 & # 10!
^)71E!A@!<(&E!o@!_!39*07&+*.E!O@!3@!K45IGE!3?.#9L@!^"77'()*0724"(70*7%*20"*-"$,7'%(,$*
      -", 0%('(')]*<"N2"(7', $*, (, $:0'0*%;*"')373\))-, 4"*06'"(6"*6$, 00-\%9*4'06\2-0"\!01\\*.\\1\b*!
      3 & 1 & # 10!
+\%(6''\&7'\%(0J*7''63('N2''0*, (4*'(;$2''(6''0*\%(*\$'', -('())!07?*.!?.*\$*\&\$*+!7\$!\$))*!7\&\&(79!)
      @**\#&'!12!\\)*!:#\\*.7;/!S\\$*7.;)!3\\$1;\#7\\#1\\&E!\]7\\)-\#99\\E!>\]0!!
39*07&+*.E!00!30!K45IVE!3?.#9L0!T&21.@7\#1&!@7&7'*@*&\!-*.$($!F&1X9*+'*!b(#9+#&'U!
      T@?9#;7%#1&$!21.!9*7.&#&'!7&+!7$$*$$@*&%!#&!)#')*.!*+(;7\\#1&0!T&!A0!30!07&\\! !R0!
      >.1#\$;)7&$F7\#7!KC)7\#.$LE!d,\$'4\*.00"009"(7\%;\$",-('()\*\\276\%9"0\*'(\*3')3"-\*''426,7'\()\*\
      d 1.9+!D+(;7\%1&79!S*\$7.;)!3\$1;#7\%1&0!!
1
```

 $: \$\%E! \ 3 \ (E!67b97\&\$F/E! < (E!A7\%7\&E!C(E!\_!39\$O7\&+\$.E!O(!3)(!K45IHE!3)("(\$\%L(!D"\$,7\%(",\$^*-",0\%("(")^*)(",\$^*-"),0\%("(")^*))))))$ 

: #\$%E! 3 (E! \_ ! 3 9\*O7&+\* .E!O(! 3 (!K45 I JE! 3 ? .#9L(!

```
W(9#F1X#;)E!60!80!8;]7@7.7E!"0E!~.7*$*.E!30E!_!39*07&+*.E!00!30!K45IIE!3('($ML0!!))
       @*%)1+191'/0!!O7?*.!?.*$*&%*+!7%!%)*!b#*&&#79!@**%#&'!12!%)*!D(.1?*7&!3$$1;#7\#1&!21.!
      S*$*7.;)!#&!: *7.&#&'!7&+!T&$%.(;%#1&E!DO*%*.E!, W0!
: 1(')9#&E!<080E!"#&$@1.*E!"0!:0E!"1/9*E!<0E!Y7''*\\7E!O0E! !39*O7&+*.E!O0!30!K45IIE!3('($\L0!
      +, &72-'()*73"*92$7'4'9"(0'%(,$*(,72-"*%;*7-,(0;"-]*?3"*@(%/$"4)"*7-,(0;"-*9,7-'U\)!!07?*.!
      " C0!
="3,#'%-*, (4*R207'; '6,7'%(*;%-*0%2-6"*63%'6"*'(*,*4')'7,$*,6,4"9'6*6%(7"U7\)!07?*.!
      " C0!
1.1$$&#;F9*E!D0! 8 0E! 139*07&+*.E!O0!30!K45IIE!3('($\L0!!!''0''(7,()$'()*62-'\%0'7:0!!07?*.!
      " C0!
39*07&+*.E!00!30!K45IIE!3?.#9L!KC)7#.LQ!+,$'=-,7'()*6,$'=-,7'%(]*+%(6"&72,$'L,7'%(J*
      9", 02-"9"(7J*6, $62$, 7'%(J*, (4*6%(7"U7)!!</@?1$#(@!?.*$*&\\*+!7\\!\))*!7&&(79!@**\\\&'!12!
      %)*!3@*.#;7&!D+(;7\\#1&79!S*\$*7.;)!3\$\1;\#7\\\#1&E!]*X!R.9\$7\&\$0!
39*07&+*.E!O0!30!K45IIE!3?.#9L!K"#$;($$7&\L0!!O**.#&'!\).1(')!\)*!*?#$\\*@#;!\$?7;*\$0!!T&!60!30!
       `.**&*!KC)7#.LE!5U&$%-'()*4%9,'(*,(4*4"#"$%&9"(7,$*4';;"-"(6"0*'(*"&'07"9'6*6%)('7'%(*
      20'()*N2, (7'7, 7'#''*, (4*N2, $'7, 7'#''*9 "73%4%$%)'"00!</@?1$#(@!?.*$*&\\*+!7\\\)*!7&&(79!
      @**\#&'!12!\\)*!3@*.#;7&!D+(;7\\#1&79!S*$*7.;)!3\$\1;\#7\\\#1\\E!\]*X!R.9*7\\$\9!
39*07&+*.E!00!30!K45IIE!3?.#9L!KC)7#.L0!?-,6'()*,(4*:%07"-'()*73"*4"#"$%&9"(7*%;*3'07%-'6,$*
      73'(@'()]*Z(7"-(,7'%(,$*"U&"-'"(6"00!</@?1$#(@!?.*$*&\*+!7\!\\))*!7&&(79!@**\#&'!12!\)*!
      3 @*.#;7&!D+(;7\\dagger1&79!S*\\dagger1.;)!3\\dagger1;\dagger1\\dagger1&E!]*X!R.9\dagger7&\\dagger0!!
39*07&+*.E!00!30!K45IIE!3?.#9L0!D&7;\\#&'!b*9\#*2$!7b1(\\!F&1X9*+'*!7&+!F&1X\#&'!\#&!7&!\#&21.@7\\#1&!
      7'*U!!3 &!#&%.1+(;\\|#1\&0!!T\&!:0! 8 7''\|#1\\|#1\KC)7\|#.LE!5(,67'()\|*="\\|$''';0\|*,=\|\27\\\|@(\%/\\\\\)"\,(4\)
      @(%/'()*'(*, (*'(;%-9,7'%(*,)''C!</@?1$#(@!?.*$*&\\+!7\!\\)*!7&&(79!@**\\\&'!12!\)*!
      3 @ *.#:7&!D+(:7\\dagger1&79!S*\S*7.:)!3 \S1:\\dagger1\\dagger1&E! 1 *X!R.9*7\&\S0!
39*07&+*.E!00!30!K45IIE!3?.#9L0!!<*$$#1&!1-*.-#*X0!!T&!W0!8(#$!KC)7#.LE!?3'(@'()*6-'7'6,$$:*,=%27*
      3')3"-M%-4"-*73'(@'()]*8"/*&"-0&"67'#"0*%(*,*;,9'$',-*6%(07-2670!</@?1$#(@!?.*$*&\*+!
```

```
39*07&+*.E!00!30!K"#$;($$7&\L0!K45I5E!87/L0!Z(7")-,7'%(J*4"&73J*,(4*6%9&$"U'7:J*+3,-,67"-'L'()*
               -", 4"-*7: &"0*73-%2)3*92$7'4'9"(0'%(, $*&-%; '$'())!!</@?1$#(@!?.*$*&h*+!7h!h)*!7&&(79!
               @**\#&'!12!\\)*!3@*.#;7&!D+(;7\\#1&79!S*\$*7.;)!3\\$1;\#7\\#1&E!"*&-*.0!
39*07&+*.E!00!30!K07&*#$\L0!K4515E!87/L0!D",4'()*;%-*2(4"-07,(4'()]*/3"-"*/"*/"-"J*/3"-"*/"*/"-"J*/3"-"*/"*
                (9!7.48\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0\% - 1.0
               D+(;7\\#1\&79!S*\$*7.;)!3\$\$1;\#7\\#1\&E!\\*\&-*.0!
39*07&+*.E!00!30!K07&*9#$%LQ!K45I5E!87/LQ!B-*0%*:%2*6$,'90*3,7*6$,'90*4%*%2-*9''73%4%$%)'''0*
               , \$\%/n^*. *7\%/(*9""7'())!! < /@?1\$\#(@!?.*\$*\&\%*+!7\%!\%)*!7\&\&(79!@**\%\#\&'!12!\%)*!3@*.\#;7\&!
               D+(;7\%1\&79!S*\$*7.;)!3\$\$1;\#7\%1\&E!"*\&-*.0!
39*07\&+*.E!00!30!KC)7#.[R.'7\&#f*.L0!K455ZE!3('($%L0! 3,7*'0*6%9&"7"(6"*-",$$:n*A,-7*Z]*0""@'()*
               73-", 40*'(*"9&'-'6, $*-"0", -630!</@?1$#(@!?.*$*&\*+!\\)*!b#*&&#79!@**\#&'!12!\\)*!
               1*%)*.97&+$0!
39*07&+*.E!00!30!KR.'7&#f*.[07&*9#$\L0!K455ZE!3('($\L0!_3,7*'0*6\%9&"7"(6"*-",$\:n*A,-7*ZZ]*
               5U&"-7*&, ("$4'06200'%(C!</@?1$#(@!?.*$*&\*+!7\\\\)*!b#*&&#79!@**\\\\'!12\\\)*!D(.1?*7&!
               3$$1;#7\\#1&!21.!S*$*7.;)!#&!:*7.&#&'!7&+!T&$\\.(;\\#1&0!
07.F#&$1&E! 8 0! 8 0E! "#&$@1.*E! "0!: 0E!A7-*.b7; FE!A0!S0E! !39*07&+*.E!00!30!!K455ZE!3('($\L0!!
                ! "6%(07-267'()*&"-;%-9,(6"*-,7'()00!!07?*.!?.*$*&\\*+!7\\!\\)\*!7&&(79!@**\\\\\\'!12!\\)\*!
               3 @*.#;7&!O$/;)191 '#;79!3$$1;#7\\#1&E!81&\\.*79E!C7&7+70!
39*07&+*.E!00!30!KR.'7&#f*.L0!K455ZE!3?.#9L0!S%/*7%*)"7*&2=$'03"4]*^2'4.(6"*:-%9*"9"-)'()*.(4*
               0"('%-*063%$, -00! d 1.F$)1?!?.*$*&\\*+!7\\!\\)*!7&&(79!@**\\\\\\\)*!3@*.\\\;7\\!D+(;7\\\\1\\7\!
               S*$*7.;)!3$$1;#7\\#1&E!<7&!"#*'10!
39*07&+*.E!00!30!KC)7#.L!K455ZE!3?.#9L0!T"7, M/3, 7n*T", 02-'()*9%('7%-'()*, (4*6%(7-%$0!
               </@?1$#(@!?.*$*&\\*+!7\!\\)*!7&&(79!@**\\\\'!12!\\)*!3@*.\\\;7\\!D+(;7\\\1879!S*\\*7.;)!
               3 $$1;#7\\#1&E!<7&!"#*'10!
C)1(E!<0!D0E!39*07&+*.E!00!30E!!87'+7E!60!K455ZE!3?.#9L0!Z(*73'''-*%/(*/%-407*c%-", (*6%$\")"*
               0724"(70m*, 6, 4"9'6*/-'7'()*4"#"$%&9"(7*'(*, (*5()$'03*, 0*, *0"6%(4*$, ()2,)"*/-'7'()*
               6$,000!07?*.!?.*$*&\\*+!7\\\\)*!7&&(79!@**\\\\\'!12!\\)*!3@*.\\\:7\\!D+(:7\\\\\\\1879!S*\\*7.:)!
               3$$1;#7\\#1&E!<7&!"#*'10!
```

```
: 1(')9#&E!<0! 8 (E! 3 9*07&+*.E!00! 3 (E! "#&$@1.*E! "0! : (E!_!a10E!D0! d 0!K455ZE! 3 ?.#9L0!d'02, $*
       6%9&-"3"(0"%(]*+%)('7'#"*&-%6"00'()*%,*,-7*7"U7*=:*&-",4%$"06"(7*,(4*,4%$"06"(7*
        -".4"-00!07?*!?.*$*&\*+!7\!\)*!7&&(79!@**\\\\'!12!\)*!3@*.\\\:7\!D+(:7\\\\\*1879!S*\\\-1.)!
        3 $$1;#7\\#1&E!<7&! "#* '10!
39*07\&+*.E!00!3(E!<;)799*.WE!"(0!:0E!_!S*/&19+$E!S(0!D(0!K455NE!87.;)L(0!_3,7*'0*$'',-('(')*,(:/,:n*))
        . *7%&%) - , &3'6, $*&"-0&"67'#"*6%(0'4"-"40!</@?1$#(@!;1&+(:\*+!7\\\))*!7&&(79!@**\\#&'!12!
       %)*!3@*.#;7&!D+(;7\\#1&79!S*\$*7.;)!3\\$1;\#7\\\#1&E!]*X!o1.F\!!
"#&$@1.*E!" (!: 0E!39*07&+*.E!00!30E!_!:1(')9#&E!<0!8 (!K455NE!87.;)L0!>)*!#@?7;%!12!&*X!
       9*7.&#&'!*&-#.1&@*&\$!#&!7&!*&'#&**.#&'!+*$#'&!;1(.$*0!T&!D0!"*!C1.\**!KC)7#.LE!5;;"670*\%;*
        8"/*>", -('()*5(#'-%(9"(700!</@?1$#(@!;1&+(;\*+!7\\\))*!7&&(79!@**\\\&'!12!\\)*!
        3 @*.#:7&!D+(:7\\#1&79!S*\$*7.:)!3 \$\1:\\#7\\\#1&E!\1*X!o1.F0!
a 10E!D0E! 8 7 ' '#1&#E! : 0E! "#&$@1.*E! "0! : 0E!_!39*07&+*.E!00!30!K455NE! 8 7.; )L0!?3"*92$7'$, : "-"4*
        -", 4'()*)%, $0*%;*"U&"-7*-", 4"-0]*[-'4)'()*="7/""(*@(%/$"4)"J*'(7"-"07J*, (4*07-,7"):*20"0!
        07?*.!?.*$*&\\*+!7\\\\) \*!7\&\(79!\@\*\\\\\'!12!\\)\*!3\@\*.\\\;7\\!D+(\:7\\\\\\\\\\\\\\!12!\\)!
        3$$1;#7\\#1\&E!]*X!o1.F\\!
d #&%*.$E!aQ!TQE!_!39*07&+*.E!QQ!3Q!K455NQE!87.;)LQ!A""-*6%$$,=%-,7'%(]*?3"*-"$,7'%(*%;*-")2$,7%-:*
        ="3, #'\%-0*7\%*6\%(6"\&72, \$M@(\%/\$"4)"*\$", -('())(!07?*.!?.*\$*\&\%*+!7\%\%)*!7\&&(79!@**\#&'!12!
       %)*!3@*.#;7&!D+(;7\\dagger1&79!S*\dagger37.;)!3\dagger1;\dagger1\dagger1&E!]*X!o1.F0!
a10E!D0E! "#&$@1.*E! "0!: 0E! 8 7E050400!*0.2(G&E!<) - 0.2(7)0.2(&! ") - 0.2(#)0.2(*)0.20.2(1&8!D)0.2*E!S0!D0!(")
```

```
3\,9*07\&+*.E!O0!\,3\,0!K\,"\,\#\$;\,(\$\$7\&hL0!K455GE!\,3\,(\,'\,(\$hL0!\,!\,''\#''\$\%\&\,'\,(\,)*\&\%7''\,(7',\$0^*;\%-*9\,,73''9\,,7'60^*\$'',\,-(\,'\,(\,)*7.3'-\%2\,)\,3*9\,''7\,,6\%)\,(\,'7'\%(0!</@?1\$\#(@!;1\&+(;\%*+!7\%!\%)*!b\#*\&\&\#79!@**\%\#\&\,'!12!\%)*!D(.1\,?*7\&!3\,\$1\,;\#7\%\#1\&!21.!\,:*7.\&\#\&\,'!7\&+!T\&\$\%.(\,;\%\#1\&E!Y(+7\,?*\$\%E!A(\&\,'7./0!)!
!
3\,9*07\&+*.E!O0!\,3\,0!K455GE!\,3\,(\,'\,(\$\%L0!\,:*7.\&\#\&\,'!7\&+!\%*7\,;\,)\#\&\,'!\#\&!?1\$\%\#\&+(\$\%.\#79!\$1\,;\#*\%\#*\$U!\,]\,*X!\%X\#\$\%!1\&!
```

 $39*07\&+*.E!O0!30!K"\#\$;(\$\$7\&HL0!K455VE!]1-*@b*.L0!T\&!\$)*!@\#\&+!12!\$)*!b*)19+*.U!S*\$19-\#\&'!\$)*!\\ \$F\#99[\$\$.7\\^*'/!;1\&(\&+.(@0!T&!00!30!3229*.b7;)!KC)7\#.LE!?3"\*-'',4'()*00'$\\^*,(4\*-'',4'()*00'5\\^*,(4\*-',4'()*00'5\\^*,(4\*-',4'()*00'5\\^*,(4$ 

 $3\,9*07\&+*.E!00!\,3\,0!K455JE!\,3\,(\,\,'\,(\$KL0!>)*!\#\&29(*\&;*!12!+1@7\#\&!*?\#\$\%*@191\,\,'\,/!X\#\%)\#\&!\%)*!2.7@*X1.F!12!\\ +*-*91\,?\#\&\,\,'\,!*O?*.\%\#\$*0!T\&!\,8\,0!:\#@1\&!KC)7\#.LE!\,?3\,''*)\,''\,(\,''-,\$'7:M0\&''6';'6'7:*'002\,''*\%(*6\%(6''\&72,\$'*))*$ 

 $39*07\&+*.E!00!30!K" \#\$; (\$\$7\&HL0!K455IE!3?.\#9L0!X(4"-07,(4'()*"\&'07"9\%\%):]*S\%/*,(4*/3:*4\%"0*'7*''); (\$2"(6"*7",63'()*,(4*\%",-('()0)!</@?1\$\#(@!;1\&+(;\%+!7\%!\%)*!7\&\&(79!@**\\#&'!12!\%)*!$ 

```
39*07&+*.E!00!30E!a#-*$E!A0E! !Y(*)9E!80!80!K4555E!3?.#9L0!3!;7$*!#&!?1#&\U!O(\\\\\\'!\\)*!&*X!
                             9"7, &3\%-*;\%-*,*("/*4"6,4"0!</@?1$#(@!;1&+(;\%+!7\\!\))*!7&&(79!@**\\\&'!12!\\)*!
                             3 @*.#;7&!D+(;7\\#1&79!S*\$*7.;)!3\$\1;\#7\\\#1&E!]*X!R.9\$7\&\$0!
C)#(E!<\(\mathbb{E}! \cdot !39*\)07\&+*.\(\mathbb{E}!\)00!\(30!\)K4555\(\mathbb{E}!\)3?.\(\mathbb{E}!\)01!\(23''*\)9\(\nabla''\)4,\(7''\)4,\(7''\)4,\(7''\)4,\(7''\)63\(\mathbb{E}'\)5,\(\mathbb{E}'\)63\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)8-\(\mathbb{E}'\)7-\(\mathbb{E}'\)7-\(\mathbb{E}'\)8-\(\mathbb{E}'\)7-\(\mathbb{E}'\)8-\(\mathbb{E}'\)7-\(\mathbb{E}'\)8-\(\mathbb{E}'\)7-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{E}'\)8-\(\mathbb{
                            0&""630!07?*.!?.*$*&\\*+!7\\!\\)*!7&&(79!@**\\\\\'!12!\\)*!3@*.\\\;7&!D+(;7\\\\\79!S*\\^7.;)!
                             3$$1;#7\\#1&E!]*X!R.9*7&$\(0!)
 39*07&+*.E!00!30!KC)7#.L0!KIZZZE!3?.#9L0!<""@'()*6%99%(*)-%2(4]*5U&$%-'()*73"*=%(40*="7/""(*
                             6%(6"&72,$*63,()"*,(4*&"-02,0'%(*73"%-:*,(4*&-,67'6"0!</@?1$#(@!;1&+(:\*+!7\\))*!
                             7&&(79!@**\#&'!12!\)*!3@*.#;7&!D+(;7\\#1&79!S*\$*7.;)!3\\$1;\#7\\#1&E!81&\.*7\\!
 39*07&+*.E!00!30!KC)7#.["#$;($$7&\L0!KIZZZE!3?.#9L0!?3"*-\%\"\%:*&\%0'7'\%(.\$'7:\*'(\*.00"00'\c)\*
                             3'07%-'6, $*0')(';'6, (6"]*?3"%-"7'6, $*&"-0&"67'#"0*, (4*-"6"(7*-"0", -63*;-%9*73"*X(*<(J*8"/*
                             s'', $, (4)*, (4*8\%-73''-(*Z-'')$, (40!</@?1)$#(@!:1&+(:)*+|7\%!\%)*!7&&(79!@**\\#&'!12!\%)*!
                             3 @*.#;7&!D+(;7\\#1\&79!S*\$*7.;)!3\$\$1;\#7\\\#1\&E! 8 1\&\\h.*7\90!
Y(*)9E! 8 0! 8 0E! !39*07&+*.E!00! 3 0!KIZZZE! 3 ?.#9L0!Y*9#*2$!7&+!$; )119*+!F&1X9*+'*U! "1@7#&=
                            $?*;#2#;!1.!+1@7#&!'*&*.79s!T&!`Q!<#&7%.7!KC)7#.LE!c(%/'()*,(4*="$'"#'()]*
                             5&'07"9%%)'6,$*'(;$2"(6"0*%(*7",63'())*,(4*$",-('())!</@?1$#(@!;1&+(;\*+!7\!\))*!
                             7&&(79!@**\#&'!12!\)*!3@*.#;7&!D+(:7\\#1&79!S*\$*7.;)!3\\$1;\#7\\#1&E!81&\.*7\90!
 39*07&+*.E!O0!30E!Y(*)9E!80!80E!<?*.9E!C0!>0E!W.7@*.E!C0E!C)#(E!<0E!!>.1&E!80!KIZZZE!3?.#9L0!
                             +\%(;-\%(7'())*73''*'002''07*..*6\$\%0''-*\$\%\%@*,7*73''*\&''-02,0'\%(*\&-\%6''000!07?*.!?.*\$*\&\%*+!7\%!\%)*!
                             7&&(79!@**\#&'!12!\)*!<1;#*\\/!21.!\)*!<;#*&\\#2#;!<\\(+/!12!S*7+\\&'E!81&\.*790!
 39*07&+*.E!00!30!K"#$; ($$7&\L0!KIZZNE!"*;*@b*.L0!!"7"-9'('()J*'(N2'-'()J*, (4*-"6%(6'$'()J*
                             5$"9"(7, -:*0724"(70m*20"0*, (4*2(4"-07, (4'())0*%;*7"U7*'(*6%(7"(7*, -", 00!07?*.!?.*$*&\\*+!7\\!
                            %)*! \frac{17}{4}. \frac{479!}{5}. \frac{87}{4}. \frac{127}{4}. \frac{17}{4}. \frac{17}{4}
Y(*)9E! 8 (E!<?*.9E!CQ!>(E! 39*07&+*.E!OQ! 3 (E! _ ! 8 ( . ? ) / E!OQ!WQ!KIZZNE! " * ; *@b*.LQ!A-%; '$'( ) *
                             &"-02,0'%(0!07?*.!?.*$*&\*+!7\!\)*!]7\#1&79!S*7+#&'!C1&2*.*&;*E!3($\#&E!>c0!
 39*O7&+*.E!O0! 3 0E! ! 8 (.?) /E!O0!W0!KIZZNE! 3 ('($\L0!?-, (0;"-1\tilde{D}"6"(7\tilde{r};'(4'())0\tilde{r}, (4\tilde{r};272-"\tilde{r})
                             &"-0&"67'#"00!</@?1$#(@!;1&+(;\*+!7\!\)*!4H<sup>!"</sup>!T&\*.&7\#1&79!C1&'.*$$!12!3??9#*+!
                             0$/; ) 191 ' /E!<7&! a.7&; #$; 10!
 39*07&+*.E!00!30!K"#$;($$7&\L0!KIZZNE!3('($\L0!\2,$'7,7'#"\*-"0",-63*9"73%4\%\%)):\*'(\forall 73\cdot 8\cdot 8\cdo
                             "426,7"%(,$*&0:63%$%):0!</@?1$#(@!;1&+(:\*+!7\!\))*!7&&(79!@**\\\\'!12!\)*!3@*.#;7&!
                             0$/;)191'#;79!3$$1;#7\\#1&E!<7&!a.7&;\#$;10!
 39*07&+*.E!O0!30!KC)7#.[R.'7&#f*.L0!KIZZNE!3?.#9L0!.*9%7'#,7"4*$%%@*,7*9%7'#,7"%(*7"-9'(%$%):]*
                               3.7*"426.7%-0*(""4*7%*@(%/*.=%27*@":*9%7'#.7'%(.$*6%(07-26700!</@?1$#(@!:1&+(:\*+!
                             7\%\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\% 10\%
```

```
39*O7&+*.E!O0!30!K"#$;($$7&\LQ!KIZZNE!3?.#$L0!+%9&-"3"(0'\(*'(07-267'\(0!07?*.!$*$$#1&!
       "#* 10!
39*07&+*.E!00!30E!8 (.?)/E!00!W0E!<?*.9E!C0!>0E! !Y(*)9E!80!80!KIZZNE!3?.#9L0!?3"*&"-02,0'#"("00*
       %;*&"-02,0'#"*4'06%2-0"]*?3"*'(7"-&$,:*%;*$",-("-*,(4*7"U70!07?*.!?.*$*&\\*+!7\\\\))*!7&&(79!
       @**\#&'!12!\\)*!3@*.#;7&!D+(;7\\#1&79!S*\$*7.;)!3\$1;\#7\\\#1&E!<7&!"\#*'10!
6*\\1&E!>0!: (E! !39*07&+*.E!00!30!KIZZNE!3?.#9L0!?", 63"-0m*#'"/0*%;*4'06200'%(]*Z002"0*%;*6%(7-%$J*
       S*$*7.;)!3$$1;#7\\#1&E!<7&!"#*'10!
8 (.?)/E!O0!W0E! !39*O7&+*.E!O0!30!KIZZNE!3?.#9L0!X0'()*73"*>",-('()*,(4*<724:*<7-,7")'"0*
       Z(#"(7%-: q S')3*<63%%*#"-0"%(*/'73*<'(), &%-", (*; "9, $"0]*5U, 9'('()*73"*&0:63%9"7-'6*
       &-%&"-7'"00!O7?*.!?.*$*&\\*+!7\\\)\*!7&&(79!@**\\\&'!12!\)\*!3@*.\\:7\\!D+(:7\\\1879!S*\\*7.:)!
       3 $$1;#7\\#1&E!<7&! "#* '10!
8 (.?)/E!QQ!WQE!39*07&+*.E!QQ!3QE!Y(*)9E!8Q!8QE!_!<?*.9E!CQ!>Q!KIZZNE!3?.#9LQ!D",4'()*&"-02,0'#"*
       7"U7]*A-%;'$'()*'(7-, '(4'#'42,$*4';;"-"(6"'00!07?*.!?.*$*&\\*+!7\\\\)*!7&&(79!@**\\\&\'!12\\)*!
       <1; #*%/!21.!%)*!<; #*&%#2#;!<%(+/!12!S*7+#&'E!<7&!"#*'10!
39*07&+*.E!00!3@!8(.?)/E!00!W@!Y(*)9E!80!8@!!<?*.9E!C0!>0!KIZZGE!"*;*@b*.L0!A"-02,0'#"*
       7"U70]* 3%*'0*-",$$:*&"-02,4"4*,(4*/3:n!07?*.!?.*$*&\\*+!7\\\\)*!7&&(79!@**\\\\\\\\)*!
       7\\#1\&79!S\*7+\#\&'!C1\&2\*.\*\&;\*E!<;1\\\\$+79\*E!3\^0!
39*07&+*.E!00!30!K"#$; ($$7&\L0!KIZZGE!3('($\L0!>",-('())*7,0@0*,(4*7,0@*4"9,(40]*A-"0"(7,7\%(J*
       - "&-"0"(7,7\%(J*, (4*4';;"-"(6"00!</@?1$#(@!;1&+(;\\*+!7\\\))*!7&&(79!@**\\\&'!12!\\)*!
       D(.1?*7&!3$$1;#7\\#1&!21.!S*\$*7.;)!\#&!:*7.\\#\&!'!7\\#+!T\\\$\.(;\\\#1\\\E!3\\)*\\\$\!`.**;*\0!
d)#\*E!C0!<\@!39*\07&+*.E!\00!3\@! !"7(')*.\\/E!8\0!KIZZGE!3('(\\L0!?3"\*-\\\03'\&\*=\\\7'\\\"(\\**)
       :%2()*63'$4-"(m0*, (,$%)'6,$*-",0%('()*,(4*9,73"9,7'6,$*$",-('()0!07?*.!?.*$*&\*+!7\\\)*!
       7&&(79!@**\#&'!12!\)*!D(.1?*7&!3$$1:#7\#1&!21.!S*$*7.;)!#&!:*7.&#&'!7&+!T&$\.(;\#1&E!
       3%)*&$E!\.**;*0!
39*07&+*.E!00!3@! !8(.?)/E!00!W0!KIZZGE!87.;)L0!.&.7-*9#&'!%)*!:1@?9*0#%#*$!12!7;7+*@#;!
       ?*.21.@7&:*U!3!%*$%!12!%)*!:1'&#%#-*!7&+!@1\#-7\#1&79!+#@*&$#1&$!12!+1@7#&!9*7.&#&'0!T&!
       00! 3; F*.@7&!KC)7#.LE! c (%/$"4) "*07-2672-"0]*. 6N2'0'7'%(J*-"7"(7'%(J*, (4*, 42$7*"U&"-7'0"0!
       </@?1$#(@!:1&+(;%*+!7%!%)*!7&&(79!@**\#&'!12!\)*!3@*.#:7&!D+(;7\\#1&79!S*\$*7.;)!
       3$$1;#7\\#1&E!C)#;7'10!
39*07&+*.E!O0!30!KIZZGE!87.;)L0!3!;7$*!21.!%)*!@1%#-7%#1&79!&7%(.*!12!*0?1$#%#1&U!C1&%.7$\#&'!
       #&21.@7\\#1\&=2\\&+\\&\\!\X\\\\)!F\&1\X9\\+\'\*=\$\**F\\\&\'\0!T\&!<\0!<\\7\)9!\KC\)7\\#.L0!+\(\(\(07-267\)'''\'\, (4\)\
       6%)('7'#"*"(),)"9"(7*/'73*"U&%0'7%-:*7"U700!</@?1$#(@!;1&+(;\%+!7\!\\))*!7&&(79!@**\\#&'!
       12!%)*!3@*.#;7&!D+(;7\\#1&79!S*\$*7.;)!3\\$1;\#7\\\#1&E!C)\#;7'10!
!
```

 $39*07\&+*.E!00!30E!8(.?)/E!00!W0E!\_!<?*.9E!C0!>0!KIZZGE!87.;)L0!T",02-'()*"9"-)'()*6%9\&"7"(6"*73-%2)3*,(,$%)'"0]*.*("/*&"-0&"67'#"*%(*,(*%$4*,6N2,'(7,(6"0!07?*.!?.*$*&\n*+!7\\!\n*)*!7&&(79!@**\\#&'!12!\\)*!3@*.#;7&!$ 

 $3\,9*07\&+*\,.E!OQ!\,3\,Q!K"\,\#\$\,;\,(\$\$7\&\%LQ!KIZZJE!\,3\,(\,'\,(\$\%LQ!\,!\,\%\,9\,,\,'(M)))$ 

```
!  39*07\&+*.E!00!30E!_!W(9\#F1X\#;)E!60!80!KIZZ4E!6(9/L0!?3''*-''\$,7'\%(03'\&*\%;*02=R''67M9,77''-*\\ @(\%/\$''4)''*7\%*'(7''-''07*,(4*-''6,\$\$0!07?*.!?.*\$*\&\%*+!7\%!\%)*!cc\!T&\*.&7\\#1&79!C1&'.*\$\$!12!\\ O\$/;)191'/E!Y.(\$\$*9\$0!!)! \\ ! 39*07\&+*.E!00!30!K''\#\$;(\$\$7&\L0!KIZZ4E!3?.\#9L0!\['':\%(4*&-'\%-\@(%/\$''4)'']\$Z002''0*'(*6\%9&-''3''(0'\%(J*\$'',-('()J*,(4*6\%(6''&72,\$*63,())''0!</@?1\$#(@!;1&+(;\*+!7\\!%)*!7&&(79!@**\\#&'!12!\%)*! \\ ...
```

$$\begin{split} & \text{W}(9\#\text{F}1\text{X}\#;\,) \text{E!}60! \; 8 \; \text{(E!} \,\_! \, 3 \, 9*07\& + *.E!00! \, 3 \; \text{(!K}1\text{ZZ5E!} \, 3 \, ?.\#\text{PLQ!} \, . \; \&\&\$'6,7\%(*\%;*,*^{'},*^{'}("-,\$*526\$'4",(*T\%4")^* \\ & 7\%\#,\$'4,7"*3'''-,-63'6,\$\!: \text{M6}\%(07-267''4*,63'''\#''9''(7*7''0700!07?*.!?.*\$*\&\$*+!7\$!\$)*!7\&\&(79!) \\ & @**\$\#\&'!12!\$)*!3 \; @*.\#;7\&!D+(;7\$(79!)) \end{split}$$

```
39*O7&+*.E!O0!30E!6(+/E!60E! !W#@E!o0!A0!KIZNNE!3?.#9L0!"1@7#&=$?*:#2#:!7&+!$%.7%*'#:!
            F&1X9*+'*U!3!.*-#*X!12!\\)*!9#\\*.7\\(.\*\0!T\&!S\0!\`7.\&\*.!\KC\)7#.LE!?3"\\*'(7"-,67'\\((\*\);\*4\\9, '(\M
            0\&''6';'6*, (4*07-,7")'6*@(\%/\$''4)''*'(*,6,4"9'6*\&''-;\%-9,(6"0!</@?1\$\#(@!;1&+(;\*+!7\!\))*!
            7&&(79!@**\#&'!12!\))*!3@*.#;7&!D+(;7\#1&79!S*$*7.;)!3$$1;#7\\#1&E!]*X!R.9*7&$0!
?.1b9*@=$19-#&'!$%.7%*'#*$!1&!$%(+*&%$@!?*.21.@7&;*!12!$:#*&;*!7&+!7&791'/!%*$%$0!T&!$0!
             `7.&*.!KC)7#.LE!?3"*'(7"-,67'%(*%;*4%9,'(M0&"6';'6*,(4*07-,7")'6*@(%/$"4)"*'(*,6,4"9'6*
            &"-:%-9.(6"0!</@?1$#(@!:1&+(:\*+!7\\\))*!7&&(79!@**\#&'!12!\)*!3@*.#;7&!D+(;7\\#1&79!
            S*$*7.;)!3$$1;#7\\#1&E!]*X!R.9*7&$0!!
%)*!*22*:%$!12!+1@7#&=$?*:#2#:!7&+!$%.7%*'#:!F&1X9*+'*!1&!$#0%)=!'.7+*.$\\\?\\!199*'*!
            $\(\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\frac{1}{2}\).$\(\fra
            4\%9, '(10\%''6'; '6*, (4*07-, 7")'6*@(\%/\$"4)"*'(*, 6, 4"9'6*\&"-; \%-9, (6")!</@?1\$\#(@!)
            ;1\&+(;\%*+!7\%\%)*!7\&\&(79!@**\%\#\&'!12!\%)*!3@*.\#;7\&!D+(;7\%\#1\&79!S*\$*7.;)!3\$\$1;\#7\%\#1\&E!]*X!
            R.9*7&$0!
Y7;)7.7;)E! 10!: 0E! !39*O7&+*.E!O0! 30!K9ZNNE! 3?.#9L0!. (*%=0"-#, 7"%(, $*0724: *%;*0"6%(4M*, (4*73'-4M
            )-,4"*7",63"-0;*27'$'L,7'%(*%;*=,0,$*-",4"-0*/'73*,#"-,)"*,(4*,=%#"M,#"-,)"*-",4"-00!
            3 $$1;#7\\#1&E! ] *X!R.9*7&$0!
W(9#F1X#;)E!60! \ 8 \ 0E! \ !39*07&+*.E!00! \ 3 \ 0!KIZNNE! \ 3 \ ?.#PL0!X0'()*, *6%)('7'#'M'(;%-9,7'%(*&-%6''00'()*)
            -"0&%(0"*9%4"$*7%*9",02-"*4%9,'(*@(%/$"4)"0!07?*.!?.*$*&\\*+!7\\\\)*!7&&(79!@**\\\&'!12!
           %)*!3@*.#;7&!D+(;7\\#1\&79!S*\$*7.;)!3\$\$1;\#7\\#1\&E!]*X!R.9\$*7\&\$0!
d)#%*E!C0!<0!! 39*07&+*.E!00!30!KIZNNE!3?.#9L0!5;;"670*%;*,)"J*#%6,=2$,-:*@(%/$"4)"J*)"(4"-J*
            0%6'%''6%(%9'6*07,720J*, (4*"73('6'7:*%(*:%2()*63'$4-"(j0*,(,$%)):*&"-;%-9,(6"0!07?*.!
            R.9*7&$0!
d #99$1&E!\0!:0E!W(9#F1X#;)E!60!80E!39*07&+*.E!00!30E! !a7..*99E!"0!KIZNNE!3?.#9L0!3!;1'&#%#-*!
            %)*1./!21.!%*$%!+*$#'&U!T@?9#;7%#1&$!21.!7$$*$$#&'!+1@7#&=$?*;#2#;!7&+!$%.7%*'#;!
            F&1X9*+'*0!T&!S0!`7.&*.!KC)7#.LE!?3"*'(7"-,67'%(*%;*4%9,'(MO&"6';'6*,(4*07-,7")'6*
            @(%/$"4)"*'(*,6,4"9'6*&"-;%-9,(6"0!</@?1$#(@!;1&+(;\*+!7\!\\)*!7&&(79!@**\\\&'!12!\)*!
            3 @*.#;7&!D+(;7\\#1&79!S*\$*7.;)!3\\$1;\#7\\\#1&E!]*X!R.9\\7&\\$0!
39*07&+*.E!O0!30E!W(9#F1X#;)E!60!80E!d #99$1&E!\0!:0E!!^1*\fe!D0!>0!KIZNGE!"*;*@b*.L0!.(*
            '(:%-9,7'%(M&-%6''00'()*,&&-%,63*7%*,00''00'()*4%9,'(M0&"6';'6*,(4*07-,7'')'6*@(%/$''4)''*
            \%(*\#\%6, =2\$, -.*, (4*, (, \$\%).*7"0700!07?*.!?.*\$*\&\%*+!7\%!\%)*!7\&\&(79!@**\#&'!12!\%)*!77\#1&79!
            S*7+\#\&'!C1\&2*.*\&;*E!<\%!0!0*\%*.\$b(.'E!a:0!
```

```
` 7.&* .E!S (\text{\text{E!}} 39*07&+* .E!O(\text{!} 3 (\text{\text{\text{E!}} \ Q!C(\text{\text{E!}} \ Q!C(\text{\text{\text{E!}} \ Q!KIZNVE! 3 ? .#9L(\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\tex}\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\te}
```

: C)#(E!<Q!5U&\$%-'()\*@'(4"-),-7("-0m\*0%6',\$J\*"9%7'%(,\$J\*,(4\*9%7'#,7'%(,\$\*0''\$;  $61\& \$E! W (!W (! [":\%(4*,*-")*,7'\%(,\$^2(4"-07,(4'()*\%;*;-,67'\%(0]*5\$"9"(70*\%;*'(07-267'\%(*73,7*6\%'7'-27'*7\%*\&-"0"-\#'6"*7",63"'-0m*@(%/\$"4)"*,(4*9\%7'\#,7'\%(0*,\&?(b)\#\$)*+!+1;\%1.79!+\#\$\$*.\%7\#1&(!C199*'*!07.FE!8"U!,&#-*.$\#\/!12!87./97\&+E!C199*'*!12!D+(;7\#1&()!KC1@?9*\#1&!87/!455VL(!3$$1;\#7\*!0.12*$$1.E!>*@?9*!,&#-*.$\#\/E!O)$\#97+*9?)$\#7E!O3(!$ 

7-#&\$E! 8 Q! \ Q!K; 1=; )7#.LQ!Z5A\*4"#"\$%&9"(7\*,0\*,\*;2(67'%(\*%;\*&"4,)%)'6,\$\*"U&"-7'0"\*'(\*0&"6',\$\*
"426,7'%(\*7",63"-00\*,&?(b9#\$)\*+!+1;\\1.79!+\#\$\\$\*.\\7\\#1&\\2!C199\\*'\\*!07.FE! 8 "U!,&\#-\\*.\\\$#\/!12!
87./97&+E!C199\\*'\\*!12!D+(;7\\#1&!KC1@?9\\\#1&! 87.;)!455GLQ!3\\$\\#\$\\7\\\\10.12\\\$\$1.!

```
!
      , &+*.'.7+(7\\dagger*!<\\(+*\&\\$U!3!0\\dagger*91\\dagger!<\\\(+/!7\\dagger!\dagger)*!\, &\\dagger*-*.$\\dagger*+12!87./97\&+E!4554!
!
       , &#-*.$#\/!12! 87./97&+!a7; (9\\/!<*&7\\\*!>7\$F!a1.;\*!1&!3??1\#&\@\\&\E!0.1@1\\\#1&!7&+!
             >*&(.*E!455I=455M!
      a1(&+#&'!C1(&;#9E!, &#-*.$#\/!12!87./97&+p$!3;7+*@/!21.!D0;*99*&;*!#&!>*7;)#&'!7&+!
!
             : *7.&#& 'E!455I=4554!
       , &#-*.$#\/!3??1#&\@*&\E!0.1@1\#1&!7&+!>*&(.*!C1@@#\\**!
             C)7#.E!IZZZ!
             8 *@b*.E!IZZN=IZZZ!
      C199*'*!12!D+(;7\\#1&E!"*7&p$!<*7.;)!C1@@#\\\**E!IZZN!
       `.7+(7\\*!S\\*\7.;)!C1@@\\\\\*\E!IZZV=IZZN!
#@W=;\\$ X 3 \\ 1 CBK@A;B?Q\\
%
      C)7#.E!O.1-1$\\!<*7.;)!C1@@#\\\**E!IZZH=IZZM!
      A1&1.7./!"*'.**!C1@@#\\\**E!IZZJ=IZZM\
      a7; (\%/!C9(bE!>*07\$!3 _ 8!, \&\#-*.\$\#/!
             D0*; (\#-*!Y17.+E! 8 *@b*.E!IZZ4=IZZH!
             0.*$#+*&\E!DO*; (\\#-*!Y17.+E!IZZJ=IZZH!
      0.*$#+*&\p$!C1@@#\\\*!21.!7!"#$;.#@#&7\\#1&=a.**!C7@?(\&E!IZZ5=IZZM!
      W&#')\\!C1@@#$$#1&!>7$F!a1.;*E!IZZI
```

```
(9EE@H@\\
!

(9EE@H@\\9\\\+DFI=?B9C7\\1CBK@A;B?Q\\9\\\3=AQE=CD\\!

"*7&p$!<*7.;)!C1@@#\\\**E!454I=4544!

<03SC!3X7.+!D-79(7\\#1&!C1@@#\\\**E!45IZ=454I!
3??1#&\\@*&\\E!D-79(7\\#1&E!7&+!0.1@1\\#1&!C1@@#\\\**E!4544!
```