```
***********
   !""#$!%!&' #()*
                                                                                                  !
!!"#$%&'"()*$%+!!%&
"##!$%&&'(!)*+,-+!./!
0\&1,2!314'2(5! \$ 6!789:;<7;:;!
=.)!
>?%, +0!A;B;C!D:9<"B:8!
/ E1'F@!F1EG+&HI J 'K(K1,121L+2-!
#$%&'()$*+,-).),/-!
M'('H', N!, K?\%F1\&5!O1F*', != , '*+&('HP5!#:B''<4&+(+, H!)
>&%Q+((%&!%Q!>?'F%(%4?P5! / E+&'H-(5!6,(H'H-H+!Q%&!O?&'(H'1,!.H-2'+(!A6O.C5!R%&%,H%5!#:B;<4&+(+,H!
       >&%Q+((%&!%Q!>?'F%(%4?P5!H+, -&+25!6O.5!R%&%, H%5!#::#<#:B;!
       S%F2+&!%0!S+&E1.!T%%P+U++&2!O?1'&!'.!.%K'1F!1.2!>%F'H'K1F!>?'F%(%4?P!1H!6O.5!#:::<B:!
V-FF!>&%0+((%&5!.H1H-(!W,FP5!T+41&HE+,H!%0!>?'F%(%4?P5!=,'*+&('HP!%0!R%&%,H%5!#:BB<B;!
       ) ((\%K'1H+!0\&12-1H+!V1K-FHP! + EG+\&5!)?'F\%(\%4?P5!=,'*+\&('HP!\%0!R\%\&\%,H\%5!\#::''<B;!
      ) 2X-, KH!>&%0+((%&5!T+41&HE+,H!%0!>%F'H'K1F!,K'+,K+5!=,'*+&('HP!%0!R%&%,H%5!#:BY<BD!
   • V1K-FHP!) ((%K'1H+5!O+, H&+!0%&!/H?'K(5!=,'*+&('HP!%0!R%&%, H%5!#::D<4&+(+, H!
    • $ +EG+&5!=, '*+&('HP!%0!R%&%, H%!Z%', H!O+, H&+!0%&! ['%+H?'K(5!#:B:<4&+(+, H!
/E+\&'H-(!S+EG+\&5!O\&12-1H+!O+,H\&+!0\%\&!R?+\%F\%N'K1F!.H-2'+(5!R\%\&\%,H\%!.K?\%\%F!\%0!R?+\%F\%NP5!\#:B;<!
   • V-FF! $ +EG+&5! ) 2*1, K+2!T+N&++!V1K-FHP5!R%&%, H%!. K?%%F!%0!R?+%F%NP5!#::"<#:B;!
) ((\%K'1H+!>\&\%0+((\%\&!1,2!>\&\%0+((\%\&!\%0!>?'F\%(\%4?P5!O1F*',!=,'*+\&('HP5!B8D9<\#::\#\backslash!H+,-\&+2!B88B!))
) 2X-, KH!V1K-FHP! $+EG+&5!6O.5!B8DY<#::#5!1,2!M'('H',N!>&%0+((%&5!6O.5!R%&%,H%5!B88B!
) (('(H1,H)-\&\%0+((\%\&!\%0!)-?'F\%(\%4?P5!R?+!)',N^{(!=,'*+\&('HP!O\%FF+N+5!/2E\%,H\%,5!B8DB<D9!)))
#&()/)-.0%.)1'*234'0)'/$'!
V%-,2',N!T'&+KH%&5!O+,H&+!0%&!>?'F%(%4?P5!3+F'N'%,!1,2!.%K'1F!/H?'K(5!6O.5!#:B:<B#!
```

) K12+E'K!T+1.5!6O.5!#::"<

```
q. %K'1F!T%E1',(!%Q!], %UF+2N+@!R+K?, %F%NP5!) &H5!1,2!3+F'N'%, Lr!
                                                                                                                                                                                                                                                                                                                                                                                          !D75!,%L!B!
                               A#:B8C@!Y8<B:BLo!
qT'(H1, H'1F! \ h \ 1P(!\%0! \ ] \ ,\%U', N0!T\%-N! \ [F\%EG+\&N^(!>\&4\%(1F!0\%\&!1!3+0\%\&E1H'\%, 1F!/4'(H+E\%F\%NPLr!)] \ ,
                                                                                                                                  !D75!, %L!B!A#: B8C@!9D<YDLo!
q$1K&%(H&-KH-&+(!1,2!.%K'+H1F!>&',K'4F+(@!),!)&K?'H+KH%,'K!O&'H's-+Lr!6,!
                                                                                                                                                                                                                                                                                                                                                                                                                                   5!
                                                         5!M%FL!#@!
                                B9"<YYL!/2"H+2!GP!0%*+&H!ZL![-'X(!1,2!),,+HH+!]L!$%(?+&L!T%&2&+K?H0!.4&',N+&5!#:BDLo!
qS'(H\%\&P!1,2!R\&1,(K+,2+,K+!',!)2\%\&,\%^{(!62+1!\%0!R\&-H?Lr!6,!)}
                                                                                                        5!B#B<"7L!/2"H+2!GP!>+H+&!0%&2%,5!/(4+,!S1EE+&5!1,2!)e+F!S%,,+H!?L!`+U!
                                  f %&c@! 3 % - HF+2N+5!#: BDLo!
q > ?'F\%(\%4?P5!R\&-H?5!1,2!H?+!h'(2\%E!\%0!b\%*+Lr!
                                                                                                                                                                                                                                                                                                                             !7D5!, %L!B!AV1FF!#: BDC@!"B<
                                7"lo!
q = -\&4F - (!G+P\%, 2!H?+! - GX+KH0!R\&-H?!', !) 2\%\&, \%'(!O\&'H's-+!\%0!S - ((+\&F!1, 2!S+'2+NN+\&Lr!)) 2\%\&, \%'(!O\&'H's-+!\%0!S-((+\&F!1, 2!S+'2+NN+\&Lr!)) 2\%\&, \%'(!O\&'H's-+(+\&F!1, 2!S+'2+NN+\&Lr!)) 2\%\&, \%'(!O\&'H's-(+\&F!1, 2!S+'2+NN+\&Lr!)) 2\%\&, \%'(!O\&'H's-(+\&F'1, 2!S+'2+NN+\&Lr!)) 2\%\%, \%'(!O\&'H's-(+\&F'1, 2!S+
                                                                                                                                                                                                                              !##5!,%L!B!A.4&',N!#:BDC5!B#"<7:Lo!
qS+N+F5! $ 1F'Kc5!1, 2!H?+!>%(H(+K-F1&!.-GF'E+Lr!6,!
                                                                                                                         5!7Y < YL! / 2'H + 2!GP!Z\%?, !O1\&-1, 1!1, 2! $ 1&c!O1-K?'L!) FG1, P@!. = f!
                                > \&+((5!\#:BDLo
q.P, H?+H'K!/*'2+, K+!1,2!WGX+KH'*+!62+, H'HP@!R?+!O%, H+E4%&1&P!.'N,'0'K1, K+!%0!/1&FP!S-((+&F^(!
                                O\%, K+4H'%, !%0!R&-H?Lr!
                                                                                                                                                                                                                                                                          !#;5!,%L!B!A$1&K?!#:BDC@!B##<77\!2%'@!
                                B:LBBBBd+X%4LB#B8#Lo!
q6, H\&\%2 - KH'%, @!uR?+!>\%', H!6(!H\%!O?1, N+!6H^Lr!6, !b1EG+\&H!n-'2+\&*11\&H5!
                                                                                                                                                                                                                                   5!"<#7L! $ %, H&+1F@! $ KO 'FF< g -++, ^(!=, '*+&('HP!
                                > \& + ((5!#:BYLo!)
qS\%F'(H'K!)F+H?'K!>F-\&1F'(E@!)!3+Q\%\&E1H'\%,1F!3+(+1\&K?!>\&\%N\&1ELr!
                                                                                                                                                                                                                                                                                                                                                                                            !DB5!,%L!#!
                                A#:B;C@!B9;<YDLo!!
q > \& 4\% (H'\%, 1F!1, 2!/e'(H+, H'1F!R\&-H?!', !/2E-, 2!S-((+\&F^{(!)})))
                                                                                                                                                                                                                              !#:5!, %L!B!A.4&', N!#:B; C@!B9:<D:Lo!
q6, H\&\%2-KH'%, \ell!R\&1, (\ell!R\&1), (\ell!
                                                                                                                                                                                                                                                                5!"<
```

. - G(H1, H'*+!&+*'('%, !%Q!1, !+, H&P!Q'&(H!4-GF'(?+2!', !#::"!1, 2!H?+, !&+*'(+2!', !#::Y!1, 2!#:BBL)) + (High equation of the context of

```
 \begin{array}{lll} !! \\ q/1\& H?^{(!b1E+,H0!.-Q0+\&',N5!S\%4+5!1,2!\,h'(2\%\,ELr!>-GF'(?+2!\%\,,F',+!',!} & 5!'((-+!,\%L!\,B7!\%\,,!) & 5!Z1\,,-1\& P!\#Y5!\#::8Lo!\,.++!! \\ & 2HH40dH?+\%H?+\&X\%-\&\,1FLK\%\,Ed\#::8d:Bd\#Yd+1\&H?(\langle F1E+,H\langle (-Q0+\&',N<?\%4+\langle 1,2< U'(2\%\,Ed!)) \}) & 1HH+&(0!S+'2+NN+&!1\,,2!S\%\&c?+'E+&!'\,,!T'1F+KH'K1F!T'(KF\%(-\&+Lr!)) & 5!\,,\%L!B79!A\,h'\,,H+&!\#::DC0!\,B''B<;:Lo!\,)\,!F\%\,,N+&!*+&('\%\,,!-\,,2+&!H?+!(1E+!H'HF+!144+1&(!'\,,!H?+!G\%\%cF+H!) & 5!44L!''D<;;L!/2L!O?&'(H'\,,1!3\,1UF(L!>'HH(G-\&N?0!T-s-+(\,,+!=\,,'*+&('HP5!N^2+1,1))) & 1.5!44L!''D<;;L!/2L!O?&'(H'\,,1!3\,1UF(L!>'HH(G-\&N?0!T-s-+(\,,+!=\,,'*+&('HP5!N^2+1,1))) & 1.5!44L!''D<;L!O?&'(H'\,,1!3\,1UF(L!>'HH(G-\&N?0!T-s-+(\,,+!=\,,'*+&('HP5!N^2+1,1))) & 1.5!44L!''D<;L!O?&'(H'\,,1!3\,1UF(L!>'HH(G-\&N?0!T-s-+(\,,+!=\,,'*+&('HP5!N^2+1,1))) & 1.5!44L!''D<;L!O?&'(H'\,,1!3\,1UF(L!>'HH(G-\&N?0!T-s-+(\,,+!=\,,'*+&('HP5!N^2+1,1))) & 1.5!44L!''D<;L!O?&'(H'\,,1!3\,1UF(L!>)'HH(G-\&N?0!T-s-+(\,,+!=\,,'*+&('HP5!N^2+1,1)) & 1.5!44L!''D<;L!O?&'(H'\,,1!3\,1UF(L!>)'HH(G-\&N?0!T-s-+(\,,+!=\,,'*+&('HP5!N^2+1,1)) & 1.5!44L!''D<;L!O.&'(H'\,,1!3\,1UF(L!>)'HH(G-\&N?0!T-s-+(\,,+!=\,,+*+&('HP5!N^2+1,1)) & 1.5!44L!''D<;L!O.&'(H'\,,1!3\,1UF(L!>)'HH(G-\&N?0!T-s-+(\,,+!=\,,+*+&('HP5!N^2+1,1)) & 1.5!44L!''D<;L!O.&'(H'\,,1!3\,1UF(L!>)'HH(G-\&N?0!T-s-+(\,,+!=\,,+*+&('HP5!N^2+1,1)) & 1.5!44L!''D<;L!O.&'(H'\,,1!3\,1UF(L!>)'HH(G-\&N?0!T-s-+(\,,+!=\,,+*+&('HP5!N^2+1,1)) & 1.5!44L!''D<;L!O.&'(H'\,,1!3\,1UF(L!>)'HH(G-\&N?0!T-s-+(\,,+!=\,,+*+&('HP5!N^2+1,1)) & 1.5!44L!''D<;L!O.&'(H'\,,1!3\,1UF(L!>)'HH(G-\&N?0!T-s-+(\,,+!=\,,+*+&('HP5!N^2+1,1)) & 1.5!44L!''D<;L!O.&'(H'\,,1!3\,1UF
```

+((1P!4-GF'(?+2!',!

```
q) &H!6(!\ '\%!V&', N+@!), !6, H&\\2-KH'\\, Lr!6,!
                                                                                                                                                                   5!44L!B<B#L!
              `+U! f %&c@!. HL! $ 1&H', ^(!>&+((5!#:::Lo!
q)0H+&U%&2Lr!6,!
                                                                                                                      5!44L!#99<9;L!`+U!f%&c@!.H!$1&H',^(!
             > \& +((5!\#:::lo!)
qO\&+1H'*+![\%\&2+\&!O\&\%((',N!',!)+U!>-GF'K!O-FH-\&+Lr!6,!]
                           5!44L!#:;<##7L!/2L!.-(1,!M1,n1,H+,!01FF1N?+&!1,2!$1&c!TL!h1F?%-HL!b%,2%,@!
               $ 1KE 'FF1,!>&+((\!`+U! f %&c@!. H! $ 1&H',^(!>&+((5!#:::Lo!
q) -H\%, % EP5! \ +N1H'*'HP5!1, 2!6FF-(%&P!R&1, (N&+(('\%, 0! \$ +, c+\^(!T+K\%, (H&-KH'\%, !\%0!) 2\%&, \%\^(!)) 2\% + \% (!\% + C+\^(!T+K\%, (H&-KH'\%, !\%0!) 2\% + \%\^(!)) 2\% + \% (!\% + C+\^(!T+K\%, (H&-KH'\%, !\%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\% + \%
                                                                       5!.>/>!.-44F+E+, H!B8885!44L!B97<; DLo!
              +(H?+H'K(Lr!)
5!M%FL!B5!
              44L!B; <\#:L!/2L! $'K?1+F!]+FFPL!`+U!f%&c@!WeQ%&2!=,'*+&('HP!>&+((5!B88DLo!))
c-,(Hr!6.!
                                                                                                                                    5!44L!B#B<"YL!/2L!)H'+!R?L!
              O%, H+E4%&1&P!) &H(Lr!T-HK?!H&1,(F1H'%,!GP!$1&H+,!2+!Z%,NLC!
q6, H&%2-KH'%, Lr!6,!
                                                                                                                                                                  5!44L!B<#DL!
              O1EG&'2N+5! $ 1((L0! $ 6R!>&+((5!B88YLo!
qM\%\%?\%+2+!, %K?!\&1, 2*+\&(K?'X), (+F@!S+2+,211N(+!c-,(H!+,!2+!(H+-,!*1,!2+!(1E+,F+*',NLr!)))
              : !AT + K + EG + \& !B88 : C@ !B9 : <9 "Lo !AW&'N', 1F!H'HF + @ !qb + 1*', N!H? + !$ 1 \& N', (@ !> - GF'K!V - , 2', N!Q & ! !
              O%, H+E4%&1&P!) &H(Lr!T-HK?!H&1,(F1H'%,!GP!S+F++,!]+'I+&LC!
qR?+!>\%F'H'K(!\%0!)+(H?+H'K!T'(H1,K+Lr!6,!)
                                                                                                                              5!44L!#"#<"YL! / 2L!>1H&'K'1! $ +P+&!
              .41\text{Kc(L!} + \text{U! f \%\&c@! . HL! } 1\&\text{H'}, ^(!>\&+((5!B88;Lo!)))
qR&1,(0%&E',N!)+(H?+H'K(@!3+0F+KH'%,(!%,!H?+!h%&c!%0!O1F*',!OL!.++&*+F2Lr!6,!
                                                                                                                                                                                      5!
              44L!B<##L!0&1,2!314'2(5! $ 'K?L@! / +&2E1,(5!B889Lo!
qV1, H1(H'K!R?', N(@!O&'H'K1F!`%H+(!R%U1&2!1!.%K'1F!W, H%F%NP!%Q!H?+!) &H(Lr!
                                                                                                                                                                                       ;:!
             AB88900!"Y<97Lo!
qV\%\&+U\%\&2Lr!
                                                           5!4L!"L!/e?'G'H'%,!O1H1F%NL!O&1,2!314'2(5! $ 'K?L0!O1F*',!O%FF+N+!
              O+, H+&!) &H!O 1FF+&P5!B889L!
qS'(H%&P5!) &H5!1,2!R&-H?@!h+FFE+&^(!O&'H's-+!%Q!)2%&,%Lr!6,!
                                                                                                                                                              5!44L!B8Y<#B#L!
              / 2L!R?% E1(!3L!VFP,,!1,2!T1F'1!Z-2%*'HIL!) FG1, P@!. H1H+!=,'*+&('HP!%0!`+U!f%&c!>&+((5!
              B88"lo!
!
```

```
5!GP! . L! . L! $ 12+X1!
```

```
. +4H+EG+\&dWKH\%G+\&!B8Y8C@!\#"L!
\#$%&'()$*+%4'0-@*A/.'01)'7-@*B,0>-<,4-@*%/&*+%/'9-*Aop!&+0+&++2C!
qR&-H?!1,2!>%F'H'K(@!)&+,2H5!V%-K1-FH5!1,2!H?+!R&-H?!%0!>%F'H'K(Lr!6,*'H+2!F+KH-&+5!>?'F%(%4?P!
       O\%FF\%s - ' - E5!O\&1, 2!M1FF+P! . H1H+!= , '*+&('HP5! $ 1&K?!#75!#:#"L!
qR\&-H?!>\%(H<R\&-H?@!3+'E1N',',N!>?'F\%(\%4?P!0\%\&!1!\;h\;\%\&F2!',!O\&'('(Lr!6,*'H+2!F+KH-\&+!',!H?+!\%,F',+!)))
       (+&'+(!
                                            5!V+G\&-1\&P!\#D5!\#:\#"L!M'2+\%!4\%(H+2!1H!H?+!F+KH-\&+!(+\&'+(!-B))
       U+G('H+0!?HH4(0dd4?'F\%(\%4?P',H'E+(\%0K\&'('(LK\%EdL!)))))
!
                              L!) H!H?+!(-EE+\&!(K?\%)F!
                                                                           !(4%,(%&+2!GP!V%&-E!
       O?\&'(HF'K?+!.H-2'+,!A0\% \bullet (C5! \$ 1\&'1(H+',!) GG+P5!.U'HI+\&F1,25!Z-FP!B8<\#75!\#:\#\#L!b+KH-\&+!H'HF+(0!)
           qR?+!6E4\%H1, K+!\%0!R\&-H?r!
       • q) &H'(H'K!R&-H?r!
          q) &H5!R\&-H?5!1,2!>\%F'H'K(r!
61',!$ 1K2%, 1F25!
                                                                                     !A#:B8C5!.%K'+HP!
       0\%\&!>?+,\%E+,\%F\%NP!1,2!/e'(H+,H'1F!>?'F\%(\%4?P!\%,F',+!K\%,0+\&+,K+5!.+4H+EG+\&!#75!#:#BL!
q. - (1, +!] L! b1, N+\&5! S \%F'(H'K!>F-\&1F'(E5!1, 2!>\%(HKR\&-H?!>\%F'H'K(Lr!O\%EE+, H1\&P!2-\&', N!1, !\%, F', +!))
       G\% c!F1 - , K?!0\% &! ) 2\& + , , +!T+ , N+& , c!O?14F' ,5!
                                           !Ab\%, 2%, 0! [F%% E (G-&P!) K12+E'K5!#:#:C5!?%(H+2!GP!H?+!
        $ 1&N1&+H! [+1-0%&H!6,(H'H-H+!%0!R?+%F%NP!',!O1EG&'2N+5!/,NF1,25!) 4&'F!B"5!#:#BL!!
guh + ?!(4\&'K?H!*+\&N+?^0!R?+!=,H'E+FP!R'E+F',+((!\%0!)) 2\%\&,\%^(!)
                                                                                    r!O\&'H'K1F!R?+\%\&P!
       3%-,2H1GF+5! $ K $ 1(H+&!=, '*+&('HP5! S 1 E 'FH%, 5!W, H1&'%5!WKH%G+&!75!#: B8L!
!qR\&-H?!1,2!0\%2,+((!6,H+\&(+KH0!)F+H?'K!S\%F'(E!1,2!>\&\%4\%('H'\%,1F!R\&-H?Lr!6,*'H+2!F+KH-\&+!1H!H?+!M=!)
       =, '*+&('HP!) E(H+\&21E5!(4\%,(\%\&+2!GP!H?+!.H-2P!O\&\%-4!O?\&'(H'1,!>?'F\%(\%4?P5!.+4H+EG+\&!B;5!))
       #:B8L!
qO?1,N',N!H?+!.-GX+KH0!S-((+\&F5!) 2\%\&,\%5!1,2!H?+!>\%F'H'K(!\%0!R\&-H?Lr!3+(4\%,(+!H\%!414+\&(!GP! $ 1\&K'1!) 1.5))
        $ %&N1,!1,2! ] 1H?P! ] 'F%?5!',!1!G%%c!(+(('%,!%,!
                        L!),,-1F!E++H', N5!. %K'+HP!0\%&!>?+,%E+,%F%NP!1,2!/e'(H+,H'1F!>?'F%(%4?P5!
       >+,,(PF*1,'1!.\|1\|+!=,'*+&('\|P5!\|WK\|\%G+&!\|BD5!\|:\|BDL!
qR\&-H?5!3+('(H1,K+5!1,2!.%K'+H1F!/*'FLr!/((1P!4-GF'(?+2!\%,F',+!',!))))
                                                                          5!1!0%&-E!?%(H+2!GP!H?+!
       6, (H'H-H+!\%0!) \&H!1, 2!62+1(!A=1C5!) -N-(H!BY5!#:BY\!
```

!

```
?\!\!4\(\text{0}\d\!)\!+\E1N\.'\0'K1\(\!\U\\\&24\&+\(\text{LK}\)Ed\!:\BYd:\9d\!:\d+4\C\&+*\\F-\!'\\,\<'\\,\|\<\U\?\!\\'\!\-\(+2\\\\G\-\\\\)
                F1EG+\&H<I-'2+\&*11\&HdL!
q>?'F\%(\%4?P5!R\&-H?5!1,2!H?+!\ h\ '(2\%E!\%0!b\%*+Lr!6O.!/e1-N-\&1F!)\ 22\&+((5!R\%\&\%,H\%5!\$1P!B\#5!\#:BY)!
                *'2+\%!4\%(H+2!1H!?HH4(@ddP\%-H-LG+dgI./W=2S).$L!
qS'(H\%\&P!1, 2!R\&1, (K+, 2+, K+!', !) 2\%\&, \%'(!62+1!\%0!R\&-H?Lr!>\&+(+, H+2!HH?+!K\%, 0+\&+, K+!q) 2\%\&, \%'(!62+1!\%0!R\&-H?Lr!>&+(+, H+2!HH?+!K\%, 0+\&+, K+!q) 2\%\&, \%'(!62+1!\%0!R\&-H?Lr!>&+(+, H+2!HH?+!K\%, 0+\&+, K+!q) 2\%\&, \%'(!62+1!\%0!R\&-H?Lr!>&+(+, H+2!HH?+!K\%, 0+\&+, K+!q) 2\%\&, \%'(!62+1!\%0!R\&-H?Lr!)
                                                         !1H!V'OHP5r!S1\&*1\&2!=, '*+\&('HP5!`%*+EG+\&!BD<B85!\#:B;L!WH?+\&!*+\&('%,(!))
                U + \& + [4\& + (+, H + 2!1H!H? + ! . 'eH?!), -1F! \$ + +H', N!\% (!H? + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2' + (5!T - c + !) ((\%K'1H'\%, !0\%\&!) 2\%\&, \%! . H - 2'
                =, '*+&('HP5! $ 1&K?!#7<#95!#:BY!1,2!1H!H?+!>?'F%(%4?P!O%FF%s-'-E5!0&1,2!M1FF+P!.H1H+!
                =, '*+&('HP5!` %*+EG+&!''5!#:BYL!
!q3+0F+KH'\%, (!\%,!)
                                                                                                                              Lr!V'*+!4%(H(!',!&+(4%,(+!H%!1,!%,F',+!
                O&%-,2!$%H'*+!.PE4%('-E5!6O.5!R%&%,H%5!$1P!#:B;5?HH4@ddUUULN&%-,2E%H'*+L,+H@!
                • qT++4!0\&1H'H-2+r!
                • q3+0%&E1H'%,1F!.%K'1F!>?'F%(%4?Pr!
                • qR\%U1\&2!1! +U!>\%F'H'K(r!
                • q > ?'F\%(\%4?P5!) \&H5!1, 2!3+F'N'\%, r!
                • qT\%P+U++\&25!R\&-H?5!1,2!H?+!3+0\%\&E1H'\%,1F!R\&12'H'\%,r!
q.-\&4F-(!G+P\%,2!H?+!.-GX+KH@!)2\%\&,\%(!62+1!\%0!R\&-H?Lr!V'0H?!),,-1F!\$++H',N!\%0!H?+!)((%K'1H'\%,!0\%\&!)
                ) 2%&,%!.H-2'+(5!=,'*+&('HP!%Q! $ %, H&+1F5! ) 4&'F!'':5!#:B;L!
!
                                                                                                   L! h \%\&c(?\%4!1H!H?+!6, (H'H-H!Q&!S+\&E+,+-H'c!-,2!
                3+F'N'\%, (4?'F\%(\%4?'+5!R?+\%F\%N'(K?+!V1c-FHaH5!=,'*+\&('HaH!n & K?5!.U'HI+&F1,25!K%<(4\%,(\%&+2!.H1+&F1))
               qS\%F'(H'K!)F+H?'K!>F-\&1F'(E@!)!3+Q\%\&E1H'\%,1F!3+(+1\&K?!>\&\%N\&1Er!
                • qS\%F'(H'K!R\&-H?!1,2!>\&\%4\%('H'\%,1F!R\&-H?r!
                       q.%K'1F!T%E1',(!%0!R&-H?@!)&H5!3+F'N'%,5!1,2!.K'+,K+r!
qS\%F'(H'K!)F+H?'K!>F-\&1F'(E@!)!3+0\%\&E1H'\%,1F!3+(+1\&K?!>\&\%N\&1ELr!>?'F\%(\%4?P!T+41\&HE+,H!)
                O%FF%s-'-E5!O1F*',!O%FF+N+5!WKH%G+&!;!1,2!B"5!#:B9L!
                                                                                                                                                                        Lr!6, *'H+2!F+KH-\&+5!
q > \& 4\% (H'\%, 1F!1, 2!/e'(H+, H'1F!R\&-H?!', !/2E-, 2!S-((+\&F^{(!)})))
                 ] 1F1 E 1 I%!O%FF+N+5!Z-,+!95!#:B9L!) F(%!4&+(+,H+2!GP!',*'H1H'%,!H%!H?+!>?'F%(%4?P!
                O\%FF\%s - ' - E5! O\&1, 2!M1FF+P! . H1H+! = , '*+&('HP5! . +4H+EG+&!#95!#:B9L!
qW,![+',N!1!3+0%&E1H'%,1F!>?'F%(%4?+&0!.4'&'H-1F'HP5!3+F'N'%,5!1,2!H?+!O1FF!H%!b%*+Lr!6,*'H+2!
               F+KH-\&+5!. K\&'4H-\&+5!V1'H?5!1, 2!. K?\%F1\&(?'4!(+E',1\&5!6O.5!`%*+EG+\&!B75!#:B7L!>\%(H+2!\%,F',+!1H!)
               H?+!6O.!6,(H'H-H'%,1F!3+4%('H%&P0!?HH40dd?2FL?1,2F+L,+HdB:Y9;d""Y7B8L!
qO&+1H', N!1!T'(H-&G1, K+@!) &H5!. %K'1F!/H?'K(5!1, 2!3+F1H'%, 1F!) -H%, %EPLr!6, *'H+2!414+&!0%&!1!
                                                                                             !1 \\ H! \\ H? + !1 \ , \ , \ -1 \\ F! \\ E + + \\ H' \ , \\ N5! \ / \ 1 \\ (H+\& \ , !T'*'('\% \ , 5! \ ) \\ E + \&'K1 \ , !
                (PE4%('-E!%,!
               >?'F%(%4?'K1F!)((%K'1H'%,5![1FH'E%&+5!T+K+EG+&!#Y5!#:B"L!)F(%!4&+(+,H+2!1(!1,!',*'H+2!
                414+&!1H!H?+!(PE4%('-E!
                               !!H!H?+!=, '*+&('HP!%0!R%&%, H%5! $ 1P!B#5!#: B9\!1(!1,!', *'H+2!F+KH-&+!', !H?+!O%FF%s-'-E!
                                                                                                        5!(4%,(%&+2!GP!H?+!) &K-(!O+,H+&!0%&!.%K'1F!Z-(H'K+!
                %,!
```

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q/1&H?^(!b1E+,H0!.-Q0+&',N5!S%4+5!1,2!h'(2%ELr!6,1-N-&1F!b+KH-&+5!6,(H'H-H+!Q%&!O?&'(H'1,!.H-2'+(5!
                     R\%\%, H\%5! \ \%*+EG+&!#B5!#:: "L!>%(H+2!%, F', +!1H!H?+!6O.!6, (H'H-H'%, 1F!3+4%('H\%P0!))
                      ?HH4@dd?2FL?1,2F+L,+HdB:Y9;d#87998L!
 qO\&+1H'*+!\left\lceil \%\&2+\&!O\&\%((',N@!)\&H'(H'K!)-H?+,H'K'HP!1,2!.\%K'1F!3+(4\%,('G'F'HP!',!^+U!>-GF'K!O-FH-\&+Lr!H'K'HP!1,2!.\%K'1F!3+(4\%,('G'F'HP!',!^+U!>-GF'K!O-FH-\&+Lr!H'K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.\%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'HP!1,2!.%K'
                     > \&+(+, H+2!1H!H?+!', H+\&, 1H'\%, 1F!(PE4\%('-E!))
                                                                                                                                                    5! \$ - (y+!2^1\&H!K\%, H+E4\%\&1', !2+! \$ \%, H\&y1F5!
                      `%*+EG+&!;5!#::"L!
q0\%2!O'H'+(5!\%\&!O'H'+(!\%0!H?+!0\%2z!312'K1F!)-N-(H','1,(5!.\%K'+H1F!.H\&-KH-\&+(5!1,2!`%\&E1H'*+!))
                     O\&'H's - +Lr! > \& +(+, H+2!1H!H? + !K\%, Q+\&+, K+!)
                                                                                                                                      5!O1F*',!O%FF+N+5!.+4H+EG+&!B#5!#::"Lo!
q$+H14?P('K(!10H+&!)-(K?U'HI@!.-Q0+&',N!1,2!S%4+!',!)2%&,%^(!
                                                                                                                                                                                                                                                  Lr!),,-1F!
                       $ ++H', N(5!O1, 12'1,!>?'F%(%4?'K1F!) ((%K'1H'%,!1,2!H?+!O1,12'1,!. %K'+HP!0%&!) +(H?+H'K(5!1H!
                    H?+!O\%, N\&+((!\%0!H?+!.\%K'1F!.K'+,K+(!1,2!S-E1,'H'+(5!S1F'01e5!\$1P!"B5!#::"Lo!!
W&N1, 'I+&5!U'H?! $ 1&'+<` % | FF+!3P1, !A>?'F%(%4?P5! $ %, KH%,!=, '*+&('HPC!%0!H?+!21P<F%, N!(PE4%('-E!
                                                                                                                    5!K%<(4%,(%&+2!GP!H?+!O1,12'1,!>?'F%(%4?'K1F!)((%K'1H'%,!
                     1,2!H?+!O1, 12'1, 1.\%K'+HP!0\%&!)+(H?+H'K(5!1H!H?+!O%, N&+((!\%0!H?+!.\%K'1F!.\%K'+, K+(!1,2!
                      S-E1, 'H'+(5!S1F'01e5!$1P!"B5!#::"Lo
```

```
• O%FF%s-'-E5!>?'F%(%4?'(K?+(!6,(H'H-H5!O%+H?+<=,'*+&('HaH5!V&1,c0-&H5!Z-,+!#B5!#::B!
q ] 1, , !E1, !) 2\%\&, \%!*\%, !T+\&\&'21!?+\&!*+\&(H+?+, zr!>-GF'K!F+KH-\&+!(4\%, (%\&+2!GP!H?+!T+41\&HE+, H!\%0!)))
        >?'F%(%4?P5!=, '*+&('HaH!O+(1EH?%K?(K?-F+!]1((+F5!O+&E1,P5!$1P!B:5!#::BL!))F(%!4&+(+,H+2!
        -,2+&!H?+!H'HF+!q)-H%,%EP5!\ +N1H'*'HP5!1,2!6FF-(%&P!R&1,(N&+(('%,5r!.%K'1F!1,2!>%F'H'K1F!
        R?+\%\&P!.+E',1\&5!=,'*+\&('HP!\%0!/2',G-\&N?5!$ 1P!B5!#::BL!
q)&H5!R&-H?5!1,2!M%K1H'%,@!M1F'2'HP!1,2!T'(KF%(-&+!',!S+'2+NN+&^(!),H'<)+(H?+H'K(Lr!),,-1F!
        E++H', N5!. %K'+HP!0\%\&!>?+, %E+, %F%NP!1, 2!/e'(H+, H'1F!>?'F%(%4?P5!>+, (PF*1, '1!. H1H+!)
        =, '*+&('HP5!WKH%G+&!;5!#:::Lo!) F(%!4&+(+,H+2!GP!',*'H1H'%,!1H!H?+!=,'*+&('HP!%0! h',2(%&5!
        $ 1&K?!#D5!#::BL!
q0121E+&^(!>?'F%(%4?'K1F!S+&E+,+-H'K(@!),!6,H&%2-KH'%,Lr!O-+(H!F+KH-&+5!O1F*',!O%FF+N+5!WKH%G+&!
        #"5!#:::L!
q \$ \%2 + \&, \text{HP!1,2!6H}(!T'(K\%, \mathbb{H}+, \mathbb{H}(\mathbb{Q}!) !b+, \mathbb{H}+, !3+(4\%, (+ \mathbb{L}r!6, *'\mathbb{H}+2! \& + (4\%, (+ \mathbb{H}\%!q) + (4\%, \mathbb{H}) + (4\%, \mathbb{H}\%!q)))))
                                                                                                       @!
        / , 'NE1(!%0! . K'+ , K+!1 , 2! h '(2% E !0\&% E !>F1H%!H%!T+&&'215r!H?+!#:::! h ' , '0\&+2! / L! h +H+&!V1K-FHP!
        ) U1&2!b+KH-&+!GP!Z1,+H! [F-EG+&N5!.+1HHF+!>1K'Q'K!=,'*+&('HP5!) 4&'F!B"5!#:::L!
!
                                                                   L!>1,+F!1H!H?+!B888!E++H',N!%0!H?+!
        ) E+\&'K1, !.\%K'+HP!0\%\&!) +(H?+H'K(!1,2!H?+!B888!E++H',N!\%0!H?+!.\%K'+HP!0\%\&!>?+,\%E+,\%F%NP!
        1,2!/e'(H+,H'1F!>?'F\%(%4?Plo!)
q)-H%, %EP5!\*\HI\*\HP5!1,2!6FF-(%&P!R&1,(N&+(('%,0!\$+,c+^(!T+K%,(H&-KH\%,!\%0!\))2\%&,\%^(!
        B888Lo!),,-1F!E++H',N5!.%K'+HP!0%&!>?+,%E+,%F%NP!1,2!/e'(H+,H'1F!>?'F%(%4?P5!=,'*+&('HP!
        %Q!W&+N%,5!/-N+,+5!WKH%G+&!D5!B888Lo!
q$1G+&E1(^(!O&'H's-+!%Q!>%(HE%2+&,'(ELr!>&+(+,H1H'%, |H%!1!(-EE+&!(+E',1&!Q%&!K%FF+N+!H+1K?+&(!%,!
                                              5!O1F*',!O%FF+N+5!Z-,+!;5!B888L!
q)-H%, %EP!10H+&!) 2%&, %@!R?+!>&1KH'K+!%0!) &H!', !R?+!) N+!%0!6H(!OF%GIF!3+4&%2-K'G'F'HPLr!6, *'H+25!
        +,2\%U+2!F+KH-\&+5!/(F'Kc!.PE4\%('-E5!T+41\&HE+,H!\%0!>?'F\%(\%4?P5!.H!b\%-'(!=,'*+\&('HP5!.H!b\%-')))
        WKH%G+&!#D5!B88DL!3+*'(+2!*+&('%, !4&+(+, H+2!1H!6O.!', !R%&%, H%5!Z1, -1&P!#D5!B888L!
q.?%&H!O'&K-'H(!1,2!$1&c+H!V1'F-&+@!R?+%&'+(!%0!H?+!O'*'K!.+KH%&Lr!RU+,H'+H?!h %&F2!O%,N&+((!%0!
        >?'F%(%4?P5! [%(H%,5!) -N-(H!B:<B;5!B88DLo!6,!
                                 5!*%FL!7#!AB88DC@!BDY<B8"L!=3b!p!?HH4(@dd2%'L%&NdB:L9D7:dUK4#:<
        41'2+'1888D7#Y87L!) !F%, N+&!*+&('%, !U1(!4&+(+, H+2!1H!1, !/K%, %E'K(!1, 2! [-(', +((!
        T+41\&HE+,H!(PE4\%('-E5!O1F*',!O\%FF+N+5!.+4H+EG+\&!\#85!B888L!
qO&'H'K1F!R?+%&P!$++H(!`+U!O+,&+!>-GF'K!)&Hr!$'2U+(H!O&'H'K1F!R?+%&P!3%-,2H1GF+5!.H!b%-'(!
        =, '*+&('HP5!.+4H+EG+&!#;<#D5!B88YLo!
 q\ )\ 2\%\&\ ,\ \%5!S\ 1G+\&E\ 1(5!1\ ,\ 2!H?+!\ )\ \&H!\%Q!>\%F'H'K(Lr!\ )\ ,\ ,\ -1F!\ \$\ ++H'\ ,\ N!\%Q!H?+!\ )\ E+\&'K1\ ,\ !>\%F'H'K1F!\ .\ K'+\ ,K+!
        ) ((%K'1H'%,!',! h 1(?',NH%,5!TLOL5!) -N-(H!#D<"B5!B88YLo!
```

```
O\%, N\&+((!',!)+(H?+H'K(5!=,'*+\&('HP!\%Q!`\%H',N?1E5!/,NF1,25!)-N-(H!#8!<!.+4H+EG+&!#5!)
       B8DDlo!
q. K?+F+&5!O1(('&+&5!1,2!R&1,(Q-,KH'%,1F!T+Q','H'%,(!%Q!S-E1,c',2Lr!•M666! h %&F2!O%,N&+((!%Q!
       >?'F%(%4?P5! [ &'N?H%,5! / ,NF1,25! ) -N-(H!#B<#Y5!B8DDLo!
qR?+!. %K'1F!. 'N, '0'K1, K+!%0!) -H%, % E%-(!) &H0!) 2%&, %!1, 2! [ {&N+&Lr!O%, 0+&+, K+!%,!
                                      5!6, H+&, 1H'%, 1F!) ((%K'1H'%, !0%&!>?'F%(%4?P!1, 2!b'H+&1H-&+5!
       =, '*+&('HP!%Q!`%H&+!T1E+5!) 4&'F!#B<#''5!B8DDLo!
qT+*+F\%4E+,H!1,2!/,K\%-,H+\&!',H?+!b'N?H!\%Q!b'G+\&1H'\%,Lr!O\%,Q+\&+,K+!\%,P
                                         5!V\&++!=, *+\&("HP!\%0!) E (H+\&21 E5!) -N-(H!B:<B95!B8DYL!
!!
q. H&1H+N'+(!0%&!6, H+&4&+H', N!6, H+, H'%, 1F!) KH'%, (Lr!. PE4%('-E!',!)+(H?+H'K(5!O1F*',!O%FF+N+5!$ 1P!Y5!
       B8DYL!
q3+1F'(E5!$ %2+&, '(E5!1,2!H?+!/E4HP!O?1'&Lr!O%,Q+&+,K+!%,!
                                                                         5!6, H+&, 1H'%, 1F!
       ) ((%K'1H'%, !Q%&!>?'F%(%4?P!1,2!b'H+&1H-&+5!=, '*+&('HP!%0!]1,(1(5!)4&'F!":!<!$1P!#5!B8DYLo!
q) 2%&, %^(!b'0+!1, 2! h %&clr!0+&E1,!.H-2'+(!0&%-45!O1F*',!O%FF+N+5! $ 1&K?!#:5!B8D;!!!
q$+H?%2%F%N'K1F!.?12%UG%e',N!',!$1&e'(H!)+(H?+H'K(@!b-ciK(!1,2!)2%&,%Lr!6,H+&,1H'%,1F!b-ciK(!
       . PE4%('-E5!$%,H&+1F5!WKH%G+&!B:<B#5!B8D9Lo!
q$%21F!)+(H?+H'K(!1,2!$%21F!R?+%&P@!.++&*+F2!%,!T%%P+U++&2^(!b+N1KPLr!O%,0+&+,K+!%,!
```

```
qu ) +(H?+H'K!62+1(^!1, 2!H?+!3%F+!%Q!) &H!',!] 1, H^(!/H?'K1F!S+&E+,+-H'K(Lr!V'QHP</'N?H?!) ,, -1F!
$++H', N5!>1K'Q'K!T'*'('%,5!) E+&'K1,!>?'F%(%4?'K1F!) ((%K'1H'%,5!b%,N! [+1K?5!O1F'Q%&,'15!
$1&K?!B8D7Lo!) F(%5!RU+,HP</'N?H?!) ,, -1F!O%,N&+((5!O1,12'1,!>?'F%(%4?'K1F!)) ((%K'1H'%,5!
0-+F4?5!W,H1&'%5!Z-,+!B8D7Lo!

q) +(H?+H'K!M1F-+@!b', 25!O1*+F5!1, 2!R&-'HHLr!6,*'H+2!K%EE+,H1&P5!.4+K'1F!.+(('%,5!)) E+&'K1,!.%K'+HP!
Q%&!) +(H?+H'K(5!$%,H&+1F5!) -N-(H!#75!B8D"L!!!

q) &H'(H'K!R&-H?!',!1!V1F(+!.%K'+HP@!3+QF+KH'%,(!%,!)) 2%&,%^(! Lr!•M66!h %&F2!O%,N&+((!%Q!>?'F%(%4?P5!$%,H&+1F5!) -N-(H!B8D"Lo!!)

quR&-H?<6E4%&H^!',!) 2%&,%^(!) +(H?+H'K!R?+%&PLr!V%&H'+H?!),,-1F!$++H',N5!) E+&'K1,!.%K'+HP!Q%&!) +(H?+H'K(5![1,Q05!)) FG+&H15!WKH%G+&!B8D#Lo!

!
!!V%-&!414+&(!4&+(+,H+2!H%!Q1K-FHP!E+EG+&(!',H?+!1&H(5!)) T%&2H!O%FF+N+5!$ 1P!B:<B#5!B8D#L!
!
q>?'F%(%4?P5!) &H5!1,2!>&1e'(!',!) 2%&,%^(!) +(H?+H'K!R?+%&PLr!h.%PLr!h.%&E(?%45!T+41&HE+,H!%Q!>?'F%(%4?P5!))
```

```
$ 1HH! [ +1*+\&(\%,5!/eH+\&,1F!/e1E',+\&5!O\%E4\&+?+,('*+!g-1F'QP',N!/e1E(!',!/,NF'(?!b'H+\&1H-\&+!1H! S'K?'N1,!.H1H+!=,'*+&('HP5!Z1,-1&P!B887L!
```

. (#\$/'0#*!'''+'(, #!Ao!p!4&'E1&P!(-4+&*'(%&\!O\$!p!O%EE'\\++!\$+EG+&C!

- O1&F%(!V&+2+&'K%!>+&+'&1!WFy15!qM+&212+!+E!S1G+&E1(!AB897<B8Y''Cr!fR&-H?!',!S1G+&E1(!AB897<B8Y''C,5!=,'*+&('212+!/(H12-1F!2+!b%,2&',15![&1I'F5!#:B7L!A.-4+&*'(%&!0%&!1!&+(+1&K?!*'('H!H%!H?+!=,'*+&('HP!%0!R%&',H%5!V1FF!#:B7LC!
- $\$ 1 \pm 1 + U! / L! 2 + (\%, 5!qb'G + \&1H', N! / E + \&N + , K + @!S E1, !T + 4 + , 2 + , K + !1, 2!) H\%, \% EP!', !/ E + \&N + , H' (E5! S + \&E + , + H'K(5!1, 2!) \&1NE1H' (ELr! \$) !R? + ('(5!) ?'F\% (\%4?P5!6O) !# : B7L!AO \$C!$
- $\begin{array}{l} [\&P1 , !3 'K?1 \&25 !qWUA, C' , N! /e' (H+ , K+\emptyset !S-E1 , !\$+1 , ' , N5 !62+ , H'HP!1 , 2!3+(4\% , ('G'F'HP!' , !S+'2+NN+\&^(!Lr!\$) !R?+('(5!>?'F\% (\%4?P5 !60 .!\#:B''L!AO\$ C!) ... \end{array}$
- $Z + FF + !S '(E1, 5!qR\&1, (F1H'\%, (!\%Q!H? + !6E4F'K'H0!R\&1K', N!S\%U!b1, N-1N+! \ h \%\&c(!G+P\%, 2!O+, 2F', !1, 2!T+\&k'21Lr!\$) !H? + ('(5!>?'F\%(\%4?P5!6O.!\#:B\#Lo!)) !H? + ('(5!>?'F\%(\%4?P5!6O.!#:B#Lo!)) !H? + ('(5!>?'F\%(\%4?P5!6O.!#:B#Lo!)) !H? + ('(5!>?'F\%(\%4?P5!6O.!#:B#Lo!)) !H? + ('(5!>?'F\%(\%4?P5!6O.!#:B#Lo!)) !H? + ('(5!>"F\%(\%4?P5!6O.!#!)) !H? + ('(5!>"F\%(Y5!AO.!#)) !H? + (((5!>"F\%(Y5!AO.!#))) !H? + ((5!>"F\%(Y5!AO.!#))) !H? + ((5!>"F\%(Y5!AO.!#)) !H? + ((5!>"F\%(Y5!AO.!#))) !H? + ((5!>"F\%(Y5!AO.!#))) !H? + ((5!>"F\%(Y5!AO.!#))) !H? + ((5!>"F\%(Y5!AO.!#))) !H? + ((5!>"F\%(Y5!AO.!#)) !H? + ((5!>"F\%(Y5!AO.!#))) !H? + ((5!>"F\%(Y5!AO.!#)) !H? + ((5!>"F\%(Y5!AO.!#)) !H? + ((5!>"F\%(Y5!AO.!#))) !H? + ((5!>"F\%(Y5!AO.!#)) !H? + ((5!>"F\%(Y5!AO.!#))) !H? + ((5!>"F\%(Y5!AO.!#)) !H? + ((5!>"F\%(Y5!AO.!#))) !H? + ((5!>"F\%(Y5!AO.!#)) !H? + ((5!>"F\%(Y5!AO.!#)) !H? + ((5!>"F\%(Y5!AO.!#))) !H? + ((5!>"F\%(Y5!AO.!#)) !H? + ((5!>"F\%(Y5!AO.!#)) !H? + ((5!>"F\%(Y5!AO.!#)) !H? + ((5!>"F\%(Y5!AO.!#))) !H? + ((5!>"F\%(Y5!AO.!#)) !H? + ((5!>"F\%(Y5!AO.!#)) !H? + ((5!>"F\%(Y5!AO.!#))) !H? + ((5!>"F\%(Y5!AO.!#)) !H? + ((5!>"F\%(Y5!AO.!#)) !H? + ((5!$
-] +*',!S-',',c5!q h ?1H!O?'F2&+,!O1,!T%@!)!>%FPK-FH-&1F!O1&2+,!R?+%&P!%Q!T+*+F%4E+,H!Q%&!/2-K1H'%,Lr!\$)!H?+('(5!>?'F%(%4?P5!6O.5!#:BBL!AO\$C!
- $3P1,!/-*+\&E1,5!q>-E4',N!6,H-'H'%,(!1,2!\$1c',N!>\&1KH'K+!T'QQ+\&+,H@!3'K?1\&2!3'\&HP^(!u6,H-'H'*+^!+1),KK%-,H!%Q!3+Q+&+,K+!1,2!R&-H?Lr!\$)!H?+('(5!>?'F%(%4?P5!6O.5!#:B:L!AO\$C!)$
- >1-F!S-GGF+5!q) !O+&H1', HP!%Q!T+1H?@!) 44&+K'1H', N!S-E1, !) , 'E1F?%%2Lr!\$) !H?+('(5!>?'F%(%4?P5!6O.5!+::8L!AO\$ C!
- [+KcP!S-GGF+5!q), !/H?'K!%0!/EG%2'E+,HLr! h. !4&%X+KH!', !.%K'1F!/H?'K(5!6O.5!#::Dlo!
- O?&'(!) FF+&(5!qR1c', N!S1, ,1?!) &+, 2H!H%!O?-&K?Lr!\$) !H?+('(5!>?'F%(%4?P5!6O.5!#::YL!AO\$C!
- [+, X1E', !0&%+, +U%F25!q]', NQ'(?+&(!1,2!O&'H+&'10!)!`+U!) 44&%1K?!H%!H?+!/, N',++&', N!T+('N,! \$+H?%2Lr!\$)!H?+('(5!>?'F%(%4?P5!6O.5!#::;Lo!
-] & '(H', 1!Z-, N5!q3%(1!b-e+EG-&N0!V'&(H!.%K'1F'(H!V+E', '(\mathbb{L} r!\$) !H?+('(5!>?'F%(%4?P5!6O.5!#::;Lo! R&'K'1!M1,!TPc5!q`1H1F'HP!Q&E!O?1%(0!S1,,1?!

```
>1-F!V+\&2', 1, 25!qR?+!.+2-KH'\%, !\%0!Z+1, ![1-2\&'FF1\&2@!)!>?'F\%(%4?'K1F!O\&'H's-+!\%0!V1H1F!R?+%\&PLr!$)!
             H?+('(5!>?'F%(%4?P5!6O.5!B88BL!AO$C!
O?\&'(!/G+\&F+5!q31H'\%, 1F'I1H'\%, 0!>1\&12\%e!\%\&!>1\&H'1F'HPzr!$) !H?+('(5!>?'F%(%4?P5!O1F*', !O%FF+N+5!B88:Lo!
>?'F%(%4?P5!O1F*',!O%FF+N+5!B88:Lo!
 > \&'(K'FF1!3 + 'E + \&5!qO\% E41(('\%, !1, 2! > \&\%H + (H!', !H? + !) \&H!\%Q!] aH? + !.K?E'2H!] \%FFU'HILr! \$) !H? + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!) + ('(5!)
             >?'F%(%4?P5!6O.5!B8D8L!AO$C!
 60%&5%.'*C'()/%0-*D%5E<.*AV!p!V1FF\!.!p!.4&',N\!..!p!.-EE+&C!
#:B7<B9!
                          R?+\%\&'+(!\%0!R\&-H?!A.\#::Y5!V\#:B7C!
#:B7<B9!
                           3+0%&E1H'%, 1F!>?'F%(%4?P!AV#::#5!V#::"5!V#::95!V#::;5!V#::Y5!V#:B7C!
#:B"<B7!
                          R?+\%\&'+(!\%0!b1,N-1N+!1,2!6,H+\&4\&+H1H'\%,@!O121E+\&5!]\&'(H+*15!1,2!.+1\&F+!AV\#::\#5!)
                          V#:::5!V#:B:5!V#:B"C!
                          R\&-H?!1,2!) -H?+, H'K'HP@!S+'2+NN+&^(!
#:B#<B"!
                                                                                                                      !A.#::95!.#::85!.#:B"C!
#:BB<B#!
                          >1\&12\%e+(!\%0!>\&\%N\&+((@!S1G+\&E1(^(!R?+\%\&P!\%0!O\%EE-,'K1H'*+!)KH'\%,!A.#::75!.#::D5!)
                          V#:BBC!
                          6T.0!) &H5!3+F'N'%,5!/2-K1H'%,5!1,2!Z-(H'K+0!R?+!O?&'(H'1,!>?'F%(%4?P!%0!`'K?%F1(!
#:B:<BB!
                           h %FH+&(H%&QQ!A.#:BBC!
                          6T.@!h1P5!R&-H?5!b'Q+@!A3+CM'('%,',N!R&-H?!Q&%E!H?+!>&+.%K&1H'K(!H%!S+N+F!A.#:B:C!
#::8<B:!
#::8<B:!
                           $ +H14?P('K(!10H+&!) - (K?U'HI@!) 2%&,%^(!`+N1H'*+!T'1F+KH'K(!A.#::"5!V#::8C!
#::D<:8!
                          6T \cdot 0!R\&-H?!', !O\%, H+E4\%\&1\&P!R?\%-N?H!A.\#::8C!
#::Y<:D!
                          6T.0!/H?'K(!10H+&!) - (K?U'HI0!) 2%&,%!1,2!b+*',1(!A..#::DC!
#::Y<:D!
                           . %K'1F! . H&-KH-&+(!1, 2!` %&E1H'*+!O&'H's-+@!S+N+F!1, 2!$ 1&e!AV#:: "5!V#:: YC!
#::9<:;!
                          R?+!OF%G1F!1,2!H?+!b%K1F@!O14'H1F'(E5!O-FH-&+5!1,2!T+E%K&1KP!A.#::;C!
#::9<:;!
                          V+E', '(H!. %K'1F!R?+%&'+(0!62+, H'HP5!>%U+&5!1, 2!Z-(H'K+!AV#::9C!
#::#<:"!
                          6T.@!312'K1F!W&H?%2%eP!AV#::#C!
B888<#:::!
                          b1, N-1N+5!R&-H?5! t!>%(HE%2+&,!O-FH-&+@!S+'2+NN+&5!3%&HP5!1,2!T+&&'21!A..#:::C!
B88:<8B!
                          >?'F%(%4?'K1F!)+(H?+H'K(!A.B88BC!
                          6T.0!6, H+&2'(K'4F', 1&P!.+E', 1&!A.B88BC!
B88:<8B!
B8D;<8:!
                          6T.@!O?&'(H'1, 'HP5!b+1&,', N5!1, 2!O-FH-&+!AVB8D;5!VB8DY5!VB8DD5!.B88:C!
60%&5%.'*65)&'&*?'%&)/E-*D%5E<.*AV!p!V1FF\!.!p!.4&',N\!..!p!.-EE+&C!
#:B7<B9!
                           ) 2%&, %!1, 2!S+N+F@!O%, (H&-KH'%, !%Q!H?+!. %K'1F!T'E+, ('%, !A6O.5!V#:B7C!
#:B7<B9!
                          Z\{\&N+, !S : 1G+\&E : 1(\land (!R?+\&P!\%0!R\&-H?!A=, '*+\&('HP!\%0!R\%\&\%, H\%5!V\#:B7C!)\}
                          6E4F'K'H!b1,N-1N+!G+P%,2!>1HH+&,(@!0+,2F',!1,2!T+&&'21!A6O.5!.#:B#C!
#:BB<B#!
                           `%&E1H'*'HP!1,2!.%K'1F!.H&-KH-&+(!A6O.5!V#:B:C!
#:B:<BB!
#:B:<BB!
                          OF+1, F', +((!1, 2!. %F'H-2+!',!^++HI(K?+^+(!/H?'K(!A6O.5!V#:B:C!
                          S 1G+&E1(^(!.%K'1F5!>%F'H'K1F5!1,2!$%&1F!R?%-N?H!A6O.5!.#:B:C!
#::8<B:!
#::;<:Y!
                           ) 2%&, %^(!
```

 $\label{eq:continuous} \#:: "<: 7! \qquad O+ , \verb|H&1F|R+eH(!',!)|, 1FPH'K!/4'(H+E\%F\%NP!A6O.5!.\#:: 7C!)$

```
+0.8'--), /\%9*\%/&*+5;9)$*C'01)$'*H4\%0.\%9*9)-.I!
W, N%', N!
                                             [\%c!E1, -(K\&'4H!\&+Q+\&++!0\%\&![F\%E(G-\&P!>-GF'(?',N5!O1EG\&'2N+!=,'*+\&('HP!)]]
                                            > \&+((5!O\%, H', --E!) - GF'(?', N5! \& KO'FF < g -++, \land (!=, '*+\&('HP!) - \&+((5!R?+! \& 6R!) - \&+((5!R) - \&+((5
                                             1,2!3%UE1,!t!b'HJF+0'+F2!
W, N%', N!
                                             3+0+\&++!0\%\&!*1\&'\%-(!1K12+E'K!X\%-\&, 1F(!!
W, N%', N!
                                             +EG+\&5!) 2*'(%\&P![%1\&25!]
                                                                                                                                                                                                 !A(', K+!#:B7C!
W, N%', N!
                                              +EG+\&5!/2'H\%\&'1F![\%1\&25!]
                                                                                                                                                                                                       !(+&'+(5!3%UE1,!t!b'HF+Q'+F2!
                                            A(', K+!#: B7C!
W, N%', N!
                                             +EG+\&5!) 2*'(\%\&P![\%1\&25!]
                                                                     A(', K+!#:B#!
W, N%', N!
                                              +EG+\&!\%0!H?+!O+,H\&+!\%0!R?+\%F\%NP!1,2!>?'F\%(\%4?P5!`\%HH',N?1E5!=]!
                                              +EG+\&5!/2'H%\&'1F!)2*'(%\&P![%1\&25!]
#:B#<##!
                                                                                                                                                                                                     !X% - & , 1F!
#:#"!!
                                             0\&1, H!144\&1'(+\&5!6(\&1+F!.K'+,K+!V\%-,21H'\%,!)
#:##<!!
                                              EG+\&5!O?\%\&1F!O\%, +KH'%, 5!O\&1, 2!314'2(!)
#:BD<!!
                                              +EG+\&5!V\%-,H1',!.H\&++H!O?-\&K?!W\&1H\%\&'\%!O?\%'\&5!O\&1,2!314'2(!...)
                                              +EG+\&5!O?1EG+\&!O?\%'\&!\%0!0\&1,2!314'2(!
#:BY<!!
#:BY<#:!
                                             F2+\&!0\%\&! $ -('K5! h +(HE', (H+&!>&+(GPH+&'1,!O?-&K?5!0&1,2!314'2(!
#:B;!!
                                             / eH+&, 1F!>&%N&1E!3+*'+U+&5!>?'F%(%4?P!>&%N&1E5![+F%'H!O%FF+N+
```

```
#:::<:D!
                               T'\&+KH\%\&!\%0!3+(+1\&K?!1,2!.K?\%F1\&(?'45!6O.!
#::9<:Y!
                               >F1K+E+,H!W00'K+\&5!6O.!
                               V1K-FHP!\&+4\&+(+,H1H'*+5!6O.![\%1\&2!\%Q!R\&-(H++(!))]
#::9<:Y!
#::9<:;!
                               O?1'\&5!6O.!>\&\%0+(('\%, 1F!.H1H-(!O\%EE'HH++!)
#::9!!
                               / eH+&, 1F!>&%N&1E!3+*'+U+&5!>?'F%(%4?P!T+41&HE+, H5!R&', 'HP!O?&'(H'1,!O%FF+N+!
                               V1K-FHP!3+4\&+(+,H1H'*+5!6O.!.+,1H+!A1K12+E'K!N%*+\&,',N!G%1\&2C!
#::"<:;!
#::"<:7!
                               O?1'\&5!6O.!/2-K1H'\%, 1F!>\%F'KP!O\%EE'HH++!
#::#<:"!
                               O?1'&5!6O.!) K12+E'K!O%-,K'F!
#::B<:#!
                               O\%<2'\&+KH\%\&5!N\&1,H<0-,2+2!\&+(+1\&K?!N\&\%-4!\%,!
                                                                                                                                            5!O1F*',!O%FF+N+!
                               V1K-FHP! $ + , H%\&5!T'*'('%, !%0!O%, H+eH-1F!T'(K'4F', +(5!O1F*', !O%FF+N+!)
#::B<:#!
#::B!!
                               / eH+\&, 1F!) 44\&1'(+\&5!V\%, 2(!4\%-\&!F1!V\%\&E1H'\%, !2+!O?+\&K?+-\&(!+H!F^*) '2+!†!F1!
                                3+K?+\&K?+5!g-vG+K!
#:::!!
                               T'\&+KH\%\&5!(+E',1\&!0\%\&!01K-FHP!1,2!N\&12-1H+!(H-2+,H(!\%,!))
                                                                                                                                             5!R%&%, H%!
                               O?1'\&5!b\%, N<31, N+!>F1, , ', N!O\% E E 'HH++5!=&G1, !6, (H'H-H+!0\%\&!O\%, H+E4%&1&P!) &H(! !
B888<#:::!
B88D<#::B!
                               >&+('2+, H5! [%1&2!%0!T'&+KH%&(5!R?+!]', N^(!O%FF+N+!V%-,21H'%,!<!=L.L!
                               O?1'\&5!O-\&\&'K-F-E!\ t !>+21N\%NP!O\%EE'HH++5!T+41\&HE+, H!\%Q!>?'F\%(\%4?P5!O1F*', !OL!)
B88Y<#:::!
                               O?1'&5!V1K-FHP!T+*+F%4E+,H!O%EE'HH++5!O1F*',!O%FF+N+!
B88Y<88!!
B88Y<88!!
                                +EG+\&5! / S<Q-,2+2!M'(-1F!3?+H%\&'K!O%EE'HH+5!O1F*',!O%FF+N+!
                               V\% - , 2', N! . + K\& + H1\&P < R\& + 1(-\& + \&5!O1F*', !O\%FF + N + !O?14H + \&!\%Q!H? + !) E + \&'K1, !E + \&'K1, H1 + \&H1 + \&H1 + \&H2 + BH2 + 
B88Y<8D!
                                ) ((\%K'1H'\%, !\%0!=, '*+\&('HP!>\&\%0+((\%\&(!A)))=>C!
B88Y!!
                               Z-\&\%\&5!),,-1F!.H-2+,H!)&H!/e?'G'H'%,5!0&1,2!M1FF+P!.H1H+!=,'*+&('HP!
                               V\% - , 2', N!K\% \to E'HH++!K?1'\&!0\%\&!H?+!q)\&H!R1Fc(r!(+\&'+(5!R\%\&\%, H\%!))
B88;<88!
                               +EG+\&5!) 2*'(\%\&P![\%c!.+F+KH'\%,!O\%EE'HH++5!.\%K'+HP!0\%\&!>?+,%E+,%F%NP!1,2!]
B88;5!B88Y!!
                                / e'(H+,H'1F!>?'F\%(%4?P!
                               O%, 0+&+, K+!T'&+KH%&5!', H+&, 1H'%, 1F!1, 2!', H+&2'(K'4F', 1&P!K%, 0+&+, K+!%, !
B889!!!
                                                                                                              5!) -N-(H!B; <B85!1H!O1F*', !O%FF+N+!
B887<89!!
                                +EG+\&5!>\&N\&1E!O\%EE'HH++!t!/e+K-H'*+!>F1,,',N!O\%EE'HH++5!',H+\&2'(K'4F',1\&P!)
                               K\%, 0+\&+, K+!\%, !
                                                                                                                                                5!>'\(\)(G-\(\)\\?5!\(\)Z-,+!\(\)\(75!\(\)B889!
                                +EG+\&!\%0!2'(K-(('\%,!N\&\%-4!0\%\&!K'*'K!F+12+\&(!\%,!H?+!q4\%F'H'K(!\%0!E+1,',N5r!0\&1,2!))
B887<#:::!
                                314'2(!
```

B887

```
?'8'0'/$'-*
!
''#$%&''$#!($)*!+,#&!
`%1?!>%&H+&!>&%Q+((%&!%Q!>?'F%(%4?'K1F!R?+%F%NP!
f 1F+!T'*', 'HP!. K?%%F!
`+U!S1*+,5!OR!:;9#:<D":;!
WQQ'K+@!A#:"C!7"#<9"7"!
/<E1'F@!X%?,L?1&+ J P1F+L+2-!
!
-#.! / ,#01*!(,2!
/?&E1,!>&%Q+((%&!%Q!/-&%4+1,!S'(H%&P5!/E+&'H-(!T+41&HE+,Hm/T5.8008-31Tm/TT211Tf(!)TjETQq(2000.2418589.92cm(%&H)0.28#24ETQq@04q3-5002
```

```
#,,$-*).'#J'+(#/)0'+%$1$-&!&)2-1'2-'D3$'#%&1!
!
q
```

```
 \begin{array}{l} q\:[\:\:-\:'F2'\:,N!O\%\:E\:E\:-\:,\:'HP!'\:,\:!H?+!\:)\:\&H(Lr!R1Fc!H\%!K\%FF+N+!1\&H!(H-2+,H(5!=6O\:)\:5!WKH\%G+\&!"5!B88YL!\:!\: \\ q\:b+1*'\:,N!H?+!\:\$\:1\&N'\:,(@!>-GF'K!V-\,,2'\:,N!Q\%\&!O\%\:,H+E4\%\&1\&P!\:)\:\&H(Lr!W4+\,,\:'\:,N!\&+E1\&c(!G+Q\%\&+!1!\ (4+K'1F!(K\&++\,,\:'\:,N!\%Q!\ !1H!H?+!M1\,,!\:)\:,2+F!\:\$\:-(+-E!O+\,,H+\&!'\,,!O\&1\,,2!\ 3\:14'2(5!\:\$\:65!\:)\:4\&'F!75!B88YL!\:)\:F(\%5!1QH+\&!H?+!(K\&++\,,\:'\:,N5!E\%2+\&1H\%\&!\%Q!1!41\,,+F!2'(K-(('\%\,,!\%\,,!M?+!Q'FE!1\,,2!\%\,,!'((-+(!\%Q!4-GF'K!Q-\,,2'\,,N!Q\%\&!H?+!1\&H(L!)))))) \end{array}
```

D<#Y<BB@!!

 $8<;<8; @!! \\ R+F+*'('\%,5!O?1,,+F!DL!6,H+\&*'+U+2!1G\%-H!=6O) \land (!4\&\%N\&1E(!1,2!4F1,(L!)) \land (!4\&\%N\&1E(!1,2!4F1,(L!))) \land (!4\%\%N\&1E(!1,2!4F1,(L!))) \land (!4\%\%N\&1E(!1,2!4F1,(L!))$

B: #B < 89 ! 312'%5! h WWT!) \$ L!6, #+&*'+U+2!1G%-#!=6O) L!

Y<#9<8"@! 312'%5! h WWT!) \$L!6, H+&*'+U+2!1G%-H!q>-GF'K!V-, 2', N!Q%&!H?+!) &H(Lr!

```
qR1Fc', N!U'H?!>\&\%E+H?+-(Lr!O1F*', !O\%FF+N+! !\#:5!, \%L!\#!AT+K+EG+\&!B8DYC@!B:<\#\#L!O\&\%-4!
                ', H+&*'+U!U'H?![&-K+!O%KcG-&,5!%&N1, 'I+2!1,2!+2'H+2!U'H?!H?+!1(('(H1,K+!%Q!(H-2+,H(!
               T+, , '(!/44F+HH!1, 2!31K?+F!M+&G-&NL!
q) G%1&2!1!0-FF<O?1(+2!.?'4Lr!3+*'+U!%0! [&-K+!O%KcG-&,5!
                                                                                                                                               5!) 4&'F!#D5!B8D;5!4L!BDL!
qO-FH-\&1F!>+(('E'(ELr!>14+\&!4\&+(+,H+2!H%!H?+!O1F*',!O\%FF+N+!Q1K-FHP!H+1K?',N!O?\&'(H'1,!M')))
               >+\&(4+KH'*+(!\%,!b+1\&,',N5!Z1,-1\&P!B"5!B8D;L!)
                                       !Ab+KH-\&+dT'(K-(('\%,!.+\&'+(C5!1,2!)))
                                      !AV'FEdT'(K-(('%,!.+&'+(CL!O%,H',-',N!/2-K1H'%,!K%-&(+(!%QQ+&+2!1H!R?+!
                ]', N^{(!)} = , *+\&("HP!O\%FF+N+5!V1FF!.+E+(H+\&!B8D7L!)
qO1\&\&P', N! / 1K?!WH?+\&^{(!)} [-\&2+, (@!R?+!O?-\&K?!1, 2!O?\&'(H'1, !) \&H'(H(Lr!]+P, \%H+!F+KH-\&+5!O?\&'(H'1, !) \&H'(H(Lr!)+P, \#H+!F+KH-\&+5!O?\&'(H'1, !) \&H'(H(Lr!)+P, \#H+!F+KH-\&+5!O?\&'(H'1, !) \&H'(H(Lr!)+P, \#H+!F+\&+5!O?\&'(H'1, !) \&H'(H(Lr!)+
                ) &H(!O%, 0+&+, K+5!]', N^(!V%F25!O%K?&1, +5!) FG+&H15!Z-FP!#8<"B5!B8D"L!
qR?+!.H-2P!\%0!) \&H(!0\%\&!.+\&*'K+1GF+!6,('N?HLr!)
                                                                                                          !BB5!,%L!"!A$1&K?!B8D"C@!#:<#7L!
q)&H0!$%&1F'HP5!$1,'4-F1H'%,5!%&!O'QH!%Q!O%2zr!b+KH-&+!',!H?+!6((-+(!',!O?&'(H'1,!b'*',N!
               +eH+, ('%, !K%-&(+5!. HL!. H+4?+,^(!O%FF+N+5!/2E%, H%, 5!V+G&-1&P!"5!B8D"L!
qR\%U1\&2!1!.?1\&+2!=,2+\&(H1,2',N!\%0!H?+!)\&H(Lr!
!BB5!,\%L!#!AT+K+EG+\&!B8D#C@!BD<#9L!
q$%-&,',N!',H%!T1,K',N0!)!R'E+!%0!h%&(?'4r!AF'H-&NPC!1,2!q$-('K!1,2!b'H-&NP!',!3+0%&E+2!
                h %&(?'4r!A41,+F!K%, H&'G-H'%, CL! h+(H+&,!3+N'%, 1F!O%, 0+&+, K+!%, !b'H-&NP!1, 2! $ -('K!',!
               H?+!O?\&'(H'1,!3+0\%\&E+2!O?-\&K?5!/2E\%,H\%,5!WKH\%G+\&!":5!B8D\#L!
q.1FH!(%&!S-E1,c',20! [F+((',N(!',!/2-K1H'%,1F!T'(K'4F+(?'4rAc+P,%H+!122&+((C!1,2!qO&'H'K'I',N!
               1,2!R\&1,(0\%\&E',N0!)!h\%\&c(?\%4!',!/2-K1H'\%,1F!>?'F\%(\%4?Pr!AU\%\&c(?\%4C!),,-1F!
               O\%, *+, H'%, 5!O?&'(H'1,!/2-K1H%&(!)((%K'1H'%,!%0!)FG+&H15!WKH%G+&!#B5!B8D#L!
q>\% ( \| <O\&' \|' K1F! 3 + QF + KH'\% \ , (!\% \ , !T\%P + U + + \&2^{(!}R\&1 \ , (K+ \ , 2+ \ , H1F!O\&' \|' s - + Lr!V1K - FHP!O\%FF\% \ s - ' - E5!R? + ! ) \\
                | ', N^{(!)} = , '*+\&('HP!O\%FF+N+5!WKH\%G+\&!B#5!B8D#L!
q h ?P!) &Hz5r!qO% E E - , '%,!1,2!O% E E - , 'HP!',!H?+!) &H(5r!1,2!q) &H(!1,2!.PEG%F(!1(!V%&E(!%0!
               T'(K'4F+(?'4Lr!]+P,\%H+!F+KH-\&+(5!O\%,Q+\&+,K+!\%,!O?\&'(H'1,'HP!1,2!H?+!)\&H(5!]',N^(!V\%F25!)
               O%K?&1,+5!) FG+&H15!Z-FP!B9<BD5!B8D#L!
qb'G+&1H'%,!1,2!T'(KF%(-&+Lr!.+E',1&!(4%,(%&+2!GP!H?+!O?&'(H'1,!3+0%&E+2!O?14F1',KP5!
               =, '*+&('HP!%0!) FG+&H15!V+G&-1&P!B:5!B8D#L!
q\,[\,+\text{HU}++\,,\,!\text{RU}\%!\,\,h\,\,\%\&F2(\text{Lr}!\,\,)\,\,22\&+((\,!\text{H}\%!\text{H}?+!\,\,)\,\,\,,\,\,,\,\,-1\text{F}!\,\,\$\,\,+E\,G+\&(\,?'4!\,\,\$\,\,++\text{H}'\,\,,\,N5!R\,?+!\,\,]\,\,'\,\,,\,N^{\wedge}(\,!=\,,\,\,'*+\&(\,'\text{HP}!\,\,))
               O%FF+N+5!WKH%G+&!85!B8DBL!
qO?\&'(H'1,!)\&H(!R\%21P0![+P\%,2!T+1H?!1,2!['\&H?Lr!b+KH-\&+5!O1F*',!O\%FF+N+5!Z1,-1\&P!B75!B8DBL!]
               WH?+&!*+&('%, (!N'*+, !1H!R?+!]', N^(!=, '*+&('HP!O%FF+N+5!Z1, -1&P!#;5!B8DB5!1, 2!H?+!6O.!
               W, H1\&'\%!O\%, Q+\&+, K+5!V\%\&H!/\&'+5!) -N-(H!\#5!B8DBL!
!
```