#\$%%&'\$(\$)!*&+,-!

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"00=R23""
                                                                                                             \#(\&9\&',(!7<<\&<+,9+!X\%:F-<<:\&A!B,<+-&<!\&9!7MM(\&-:!S-8,U\&:\&!
                                                                                               !
                                                                                                             79,(?<&<!X%:K%,) A!.-M,%+)-9+!:F!#:$9<-(&9K!X<?'8:(:K?A!
                                                                                                            O-8, O\&(\&+,+\&:9!,9:!PM-'\&,(!J:\$',+\&:9A!H:\%+8-,<+-\%9!!T9\&U-\%<\&+?!
                                                                 233 = !
                                                                                                            E8&: !P+,+-!T9&U-%<&+?!
                                                                 233>R
                                                                                                            \#(\&9\&',(!7;c\$9'+!V,'\$(+?A!.:'+:\%,(!,9;!B,<+-\%<!X\%:K\%,))<A!!
                                                                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..
                                                                 B - ; \&'\&9 - A!T9\&U - \% < \&+?!:F!B, <<, '8$<-++< A!4: \%'-<+-\%!
!
                  !
                             !
                                                                 2323R!!
                                                                                                             7 : c\$9' + !X\% : F - << : \%A!P'8 : : (! : F!5 - , (+8!P'\&-9' - <! \setminus !O - K\& <! # : ((-K - !)) - (+8!P' & - 9' - <! \setminus !O - K & <! # : ((-K - !)) - (+8!P' & - 9' - <! \setminus !O - K & <! # : ((-K - !)) - (+8!P' & - 9' - <! \setminus !O - K & <! # : ((-K - !)) - (+8!P' & - 9' - <! \setminus !O - K & <! # : ((-K - !)) - (+8!P' & - 9' - <! \ )
\#:$%<-<!G,$K8+/!
                                                                  "0>>R02
                                                                                                             G-) M(-!T9\&U-\%<\&+?!R!`9+\%:;\$'+\&:9!+:!X<?'8:(:K?d!@-,\%9\&9Kd!
                                                                                                             JZM-\% ) -9+,(!X<?'8:(:K?!\!@,Q:\%,+:\%?!
                                                                  "002
                                                                                                             O_{K-\%}^{1} = 0 : M^{2} = 0 
                                                                                                             JZM-\% ) -9+,(!X<?'8:(:K?!@,Q:\,+:\\?!
                                                                                                            H: \%+8-,<+-\%9!T9\&U-\%<\&+?!\setminus!7;U,9'-;!@-,\%9\&9K!`!\WS,<\&'!
                                                                  "00=R23""
                                                                                                            X\%9'\%M(-<!:F!@-,\%9\%9KYd!7;U,9'-;!@-,\%9\%9K!``!\*-\%Q,(!)
                                                                                                             S-8,U\&: \%Yd!7;U,9'-;!@-,\%9\&9K!```!WPN&99-\%!,9;!#%&+&'<Yd!G8-<&<!
                                                                                                            P-) &9, %d!V&-(;!X(,'-)-9+!
                                                                                                             4 - <+-\%9!H - I!J9K(,9;!T9\&U-\%<\&+?!\!O,;\&',(!S-8,U\&:\%\&<)!WXPe!
                                                                 233>R!
                                                                                                             = |3 \text{Yd}|@-, \$9 \&9 \text{K}| \text{WXPe}| |3 \text{Yd}| |68-: \$-+\&', (!V:\$9;, +\&:9 < !WXPe}| |3 \text{CYd}|
                                                                                                            M\%: U\&; -<!<\$M-\%U\&<\&:9!F:\%!; : '+:\%,(!,9;!),<+-\%<!<+\$; -9+<!
                                                                                                            O-K\&<!\#:((-K-!)!*-\%0,(!S-8,U\&:\%d!O-<-,\%'8!..-<\&K9!
                                                                 2323R!
X : < \& +\& : 9 < /!
                                                                 "00>R!2332!
                                                                                                            X\%: K\%, )!. &%-'+: %A!H-I!J9K(,9;!#-9+-%!F:%!#8&(;%-9!
                                                                 2332R!!
                                                                                                             . &%-'+:%!:F!O-<-,%'8A!H-I!J9K(,9;!#-9+-%!F:%!#8&(;%-9!
                                                                 23"3R23"L!
                                                                                                             \#8,\&\%!:F!X\%:F-<<\&:9,(!X\%,'+\&'-A!G8-!S-\%N<8\&\%-!7<<:'\&,+\&:9!F:\%!!
                                                                                                             S-8,U\&:\%!79,(?<\&<!,9;!G8-\%,M?!
                                                                                    !
                                                                 23"3R23"L!
                                                                                                             S: \%; !: F! . \&\% - '+: \% < A! 7 <<: '\&, +\&: 9!: F!X\%: F- << \&: 9, (!S-8, U&: \%! 79, (?<+<!))
                                                                                                            X\% - < \&; -9 + !R!S : , \%; !:F! . \&\% - '+: \% < A! 7 << : '\&, +&: 9!:F!X\%:F - << \&:9, (!)
                                                                 23""R23"D!
                                                                                                             S-8.U\&:\%!79.(?<+<!
!
B, c: \%! \# (\&9\&', (!O-<M:9<\&Q\&(\&+\&-<!F:\%!+8-!H-I!J9K(,9;!#+\%!F:\%!#8\&(;\%-9/!))
                                                                 "6 P$M-%U&<&:9!:F!,((!%-<-,%'8!':9;$'+-;!,+!+8-!H-I!J9K(,9;!#-9+-%!F:%!
                                                                             #8&(:%-96!
                                                                 26 Gh, &9&9K1<$M-\U&<&:9!:F!X\h:K\h, )!.\&\h-'+:\h<\!X\h:K\h, )!PM-'\&,(\&<+<\!A!
                                                                            :+8-\%!;-U-(:M)-9+,(!;\&<,Q\&(\&+\&-<6!)
                                                                 L6 P$M-\U&\&:9!:F!,;) &9&\<+\\,+&U-\!\'(&9\\\,',\(A!-;\$\',+\\\:9,\(A!,9;\\\-\\\\,')-\\\\,').
                                                                            F$9'+&:9&9K!:F!,F:%-)-9+&:9-;!%-<&;-9+&,(!$9&+<6!
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#, ) 0%&;K-!#-9+-%!F:%!S-8,U&:%!P+$;&-<!WP$MM:%+&9K!B-) Q-%A!233DR
                                M\% - < -9 + Y!
                                7 <<: \' \&, +\&: 9! : F!X\% : F- <<\&: 9, (!S-8, U\&: \%!79, (?<+<!WP$MM: %+&9K!B-) Q-%A!
                                2330RM%-<-9+Y!
!
                        @:',(!P:'&-+&-</!
                                S-hN<8\&h-!7<: \&,+\&:9!F:h!S-8,U\&:h!79,(?<\&<!,9;!G8-h,M?!WB-)Q-hA!
                                "00=RM\%-<-9+d!#:9F-\%-9'-!M(,99\&9K!,9;!<'8-;$(\&9K!':))\&++--!)-)Q-\%A!
                                "00>RM%-<-9+d!X%: K%.)!#8.&%A!"000R2333d!X%-<&:-9+RJ(-'+!2333R233"d!
                                X\%-\langle \&; -9+!233"R2332d!S7 \#S!7 \#J!'::\%; \&9,+:\%!F:\%!S7S7G!2332RM\%-<-9+Y6!
                                .-(,I,\%-!*,((-?!7<<:'\&,+\&:9!F:\%!S-8,U\&:\%!79,(?<\&<!WB-)Q-\%A!"0>>R
                                "OOLY6!
<u>b%,9+</!</u>
                        7 \text{ MM(\&',9+/!O\&<NR,U-\%<\&:9!,9;!\%\&<NRM\%:9-9-<<!\&9!8\$),9!,9;!9:98\$),9!,9\&),(<a!
                        S\&: ) -;\&',(!O-<-,\%'8!P\$MM:\%+!b\%,9+!V\$9;-;/!h2A]33A!!
                        G-) M(-!T9&U-%<&+?A!"00"6!
                        \#: \mathbb{R}^9 U - \langle +\&K, +: \%/!S - 8, U\&: \%, (!): \rangle - 9 + \$ ) !, 9; !F(-Z\&Q\&(\&+?!\&9!) - 9 +, (!\%-+, \%; , +\&: 9!)
                        #8&(;!5-,(+8!,9;!5$),9!.-U-(:M)-9+!WH\#5.YA!F\$9;-;!2332R233]6!
                        X\%\&9'\&M,(!^9U-<+\&K,+:\%/!!X\%:c-'+!^^/!7!S-8,U\&:\%,(!J':9:)\&'!7MM\%:,'8!+:!
                        B, Zk) \&^k Y = Y + (!V - : 0, 'N! W + \&((k, )! * 6! . $0 - ! \cdot !# : R^9 U - < +&K, + : WY A!
                        b%,9+!9$) Q-%!"!XE"!5 . !3D====R3"!F%:) !+8-!H,+&:9,(!`9<+&+$+-!:F!#8&(;!5-,(+8!
                        ,9;!5$),9!.-U-(:M)-9+!WH`#5.A!F$9;-;!B,?!233DR2330Y6!
                        #: RX%&9'&M,(!`9U-<+&K,+:%/!E%K,9&^,+&:9!F:%!7$+&<)!O-<-,%'8A!2330!7MM(&-;!
                        O-<-, %'8!#:) M-+&+&:9!W I &+8!O-Q-'',!B,'.:9,(;Y/!JZ,) &9,+&:9!:F!X%-%-i$&<&+-!
                        PN&((<!F:\%!@-,\%9\&9K!T<\&9K!*\&;-:!B:;-(\&9K\!F\$9;-;!"12330R"123"36!
                        \#: RX\%9'\&M, (!`9U-<+\&K,+:\%/!E\%K,9\&^,+\&:9!F:\%!7$+&<)!O-<-,\%'8A!23"3!7MM(&-;!
                        O-<-, %'8!#:) M-+&+&:9!WI&+8!O-Q-'', !B,'.:9,(;!,9;!.&,9,!X,\\%?R#\\$I?<\/!
                        T < \&9K!, !: \&\% - '+! : 0 < -\%U, +\& : 9!, <<-<<) -9+!0, ++-\%?!+:!, <<-<<!:$+':) -<!:F!J`S`!F:\%!
                        '8&(;%-9! I &+8!,$+&<) A!F$9;-;!"123"3R"123""6!
                        #:R`9U-<+&K,+:%/!X%:c-'+!```/!S-8,U&:%,(!J':9:)&'<!,9;!+8-!,9,(?<&<!:F!#7S!\`<-%!
                        . -(-:9/!X%&9'&M,(!'9U-<+&K,+:%!F:%!X%:c-'+!LA!B&'8,-(!#,+,(::!X%:K%,)!X%:c-'+!X`YA!
                        b%,9+!9$) Q-%!"!X3"!5 . 3] D]=R3" 72!F%: ) !+8-!H,+&:9,(!^9<+&+$+-!:F!#8&(;!5-,(+8!
                        ,9;!5$),9!.-U-(:M)-9+A!F$9;-;!23"3R23"]6!
                        \#: \mathbb{R}^9 U - < + \&K, +: \%/!S - 8, U\&: \%, (!X - \% < \&< + -9' - /!S, < \&'A!G\%, 9 < (, +&: 9, (A!, 9; !#(&9&', (!S, -1))))
                        P+$: &-<d!G:9?!H-U&9A!X%&9'&M,(!'9U-<+&K,+:%A!b%,9+!9$) O-%!"!OE"!5.3=D]C=R
                        3"7"!F%:)!+8-!H.+4:9.(!^9<+4+$+-!:F!#84(:!5-.(+8!.9:!5$).9!.-U-(:M)-9+4!
                        F$9;-;!23""R23"=6!
                        ١
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J : \& + : \& \& , (!O - U\& - I / !)
                          "00CR"000
                                           b$-<+!O-U&- I -\(\delta\)!F:\(\hat{1}\)+8-!a:\(\hat{8}\)9,\(!:\)F!\(7\)M(\(\delta\-:\)!S-8,\(U\delta\:\)\\!79,\(?<\da\<6!!!\)
                         2333R!
                                           B-) 0-\%!:F!J:\&+:\&\&,(!S:,\%;!\setminus!S-8,U\&:\%,(!^9+-\%U-9+\&:9<6!)
                                           B - ) O - \%! : F!S : .\% : ! : F!J : \& + : \% < ! \setminus !a : \$\%9 . (! : F! 7 MM(& - : !
                         2333R233"
                                           S-8,U\&:\%!79,(?<\&<6!
                         2332R23">!
                                           B-) Q-\%!:F!S:,\%;!:F!J;\&+:\%<!\1a:\$\%9,(!:F!7MM(\&-;!)
                                  !
                                           S-8,U\&:\%!79,(?<\&<6!
                                           233>R23"D!
                         2332R!
                                           b$-<+!7'+&:9!J;&+:%!F:%!+8-!a:$%9,(!:F!7MM(&-;!S-8,U&:%!79,(?<&<6!
                         2332!
                                           b$-<+!O-U&-I-%!\!J$%:M-,9!a:$%9,(!:F!#(&9&',(!H$+%&+&:96!
                         2332R23"2!
                                           b$-<+!O-U\&-I-\%! \cdot [:F!7$+\&<)!,9;!.-U-(:M)-9+,(!
                                           . &<:%:-%<6!
                         2332!
                                           b -<+!O-U\&-I-\%! \setminus JZM-\&) -9+, (!S\&:(:K?!,9;!B-;\&'\&9-6!)
                         233D!
                                           b$-<+!O-U&-I-\!\!S-8,U&:\!O-<-,\\'8!B-+8:;<\!^9<+\\$)-9+<\!,9;!
                                           #:) M$+-%<!
                         2330R23"3!
                                           b - < +!7 + \& : 9!J; \& + : \%! \setminus !S - 8, U\& : \%!79, (? < \& < !\&9!X\%, '+&'-!
                         23"3R
                                           7'+\&:9!J;\&+:\%!\setminus !S-8,U\&:\%!79,(?<\&<!&9!X\%,'+\&'-!
                         23""R
                                           b -<+!O-U\&-I-\%! \setminus !X-;\&,+\%\&'<!
                         23"2R
                                           J; \&+: R\&9R\#8\&-F! \setminus S-8, U\&: \%, (!^9+-\%U-9+\&:9<!
                         2323R!!
                                           B-) Q-\%!: F!J; &+: \%, (!S:, \%;!\!a:\$\%9, (!:F!+8-!JZM-\%8) -9+, (!79, (?<&<!!
                                           :F!S-8,U&:%!
S\&Q(\&: K\%, M8?/!
        E\%K\&9,(!X,M-\%<1S::N!\#8,M+-\%</!
B::\%-! A!S$((,\%;!7A!PI--+),9!bA!78-,\%9!456!7<<--<\&9K!,9;!G\%-,+\&9K!79Z\&-+?!\&9!^9;&U\&;$,(<!I\&+8!
    7 $+&< ) 6! ! "#$%\d'() * '+\d.\d-$.\d'\0) I -. '2"()34356!; :\delta\"36""CCl3"D]DD]12""3]"=C>!
\#\&U\&:\&9\&RB:++,\&1:\#6A!B,'H,\&(A!.56A!B.,9:-(A!H6A!O:c,<A!.76A!g!78-,&9A!46!&\&9!M&-<<Y6!7$+:),+&'!
    %-&9F:%'-)-9+6!`9!a6!@6!B,+<:9!W-;<6YA!7MM(&-;!Q-8,U&:%!,9,(?<&</!7!':)M%-8-9<&U-!8,9;Q::N6!
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78-, \%9 \land !4656 \land !2-\% I \& 9 \land !B6 J \land !J\& '8-\% \land !X6 \land !G, ?(:\% \land !\#6 \land !g !H\& '8 : (<\land !\_6 ! \ \ 233 " \ \ '' \land !' \ \ '' + 1 : !\& 9 + -9 < \& U - !\& 9 + -\% U - 9 + \& : 9 < !F : \% !F : : ; !\% -F$ < , (6! !'' \# \% \&' () * '+ \&, \& -\$ . \&' /;) 3P; !L>] RD3] 6!
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 $78-, \$9 \$! \ 4 \ 65 \ 6 \$! \ \#, <+ \$9 - \$! \ G6 \$! \ H, \$(+\$! _ 6 \$! \ g \ ! \ b \ \$ - - 9 \$! \ b \ 6 ! \ W233" \ Y6 ! \ 79!, <<-<<) -9 + ! : F!F : : ; !, ' ' - M +, 9 ' - ! \& 9 ! ' 8 \& (; \% - 9 ! I \& + 8 !, \$ + \& <) ! : \%! \ M - \%U, < \& U - ! ; - U - (: M) - 9 +, (! ; \& <: \% ; - \% ! R$

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P+, ?-%A!P6A!b%, FFA!O6!S6A!@&QQ?A!B6!@6A!g!78-,%9A!46!56!W233OY6!!JFF-'+!:F!'8:&'-!:F!+,<N!<-i$-9'-!:9!
       %-<M:9; &9K6!!S"C"$(-#)&/)6@.&C7)XA"-.(@7)N&C'(+"(C;)=;)CCLRCD26!
X-9'-A!P6G6A!O:<':-A!J6B6A!S:$\%-+A!a6#6A!78-,\\9A!4656!\\2330\\6!JU,(\$,+\&:9!:F!+8-\\(-(,+\&U-\!U,(\&;\&+?!:F!))
       +8%--!;-<'%&M+&U-!,<<-<\)-9+!)-+8:;<6!?'@(/$8)',)6AA8&"+)!"#$%&'()6/$8BC&CA!>3A!D2]RDD=0!
(-\&9A!a6@6A!B, '.:9,(;A!O6X6V6A!*,\&((,9':\$\%+A!b6A!78-,\%9A!4656A!g!.\$Q-A!46*6!\@2330Y6!G-,'8\&9K!
        ; &<'%&) &9,+&:9!:F!,;$(+!K,^-!;&%-'+&:9!+:!'8&(;%-9!I&+8!,$+&<) A!S"C"$(-#)&/)6@.&C7)XA"-.(@7)
       N\&C'(+"(CA!=A!D2RD06!)
5 - \% < 1.4 + 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.4 = 1.
       &; -9+&F?&9K!M%-'$%<: %<!+: !M%:Q(-)!Q-8,U&: %6!?'@(/$8)',)6AA&&"+)!"#$%&'()6/$8BC&C;)>3;!=OCRC320!
#8, MM-((A!H6A!b%, FFA!O6S6A!@&QQ?A!B6A!g!78-,%9A!4656!W2330Y6!!V$%+8-%!-U,($,+&:9!:F!+8-!-FF-'+<!:F!
        ):+&U,+&9K!:M-%,+&:9<!:9!M%-F-%-9'-!,<<-<<)-9+!:$+':)-<!%-<-,%'8!&9!,$+&<)!<M-'+%$)!;&<:%;-%<6!
       S''C''$(-#)&/)6@.&C7)XA''-.(@7)N&C'(+''(C;)=;)==3R==00!
B&K$-(A!#6A!#(,%NA!_6A!G-%-<8N:A!@6A!g!78-,%9A!4656!W2330Y6!!G8-!-FF-'+<!:F!%-<M:9<-!&9+-%%$M+&:9!,9;!
       %-; &%-'+&:9!,9;!<-(-'+&U-!<-%:+:9&9!%-$M+,N-!&98&Q&+:%<!W<-%+%,(&9-Y!:9!U:',(!<+-%-:+?M?6!!?'@(/$8)',)
       6AA&&"+)!"#$%&'()6/$&BC&C;)>3;!>>LR>>>6!
 . $Q-A! 4 6! * 6A! 7 8-, %9A! 4 6! 5 6A!@&: 9-((:R.-H:(FA! 6!B 6A!g!B'`(U,9-A! 4 6!a6!W2330Y6!S-8,U&:%,(!
        ):)-9+$)/!G%,9<(,+&:9,(!%-<-,%'8!&9!&9+-((-'+$,(!,9;!;-U-(:M)-9+,(!;&<,Q&(&+&-<6!!"#$%&'()6/$8BC.)
       <'+$B;)54A!2L>R2]L6!
B&K$-(A!#6V6A!e,9KA!56A!V&99A!56!g!78-,%9A!4656!W2330Y6!T<&9K!':9;&4&:9,(!;&<'\%\)&9,+&:9!+\,&9\&9K!+:!
       -<+, Q(\&<8!; -\%\&U-; !+-Z+\$, (!':9+\%:(!\&9!, '+\&U\&+?!<'8-; \$(-<!I\&+8!'8\&(;\%-9!;\&,K9:<-; !I\&+8!,\$+\&<) 6!!?'@(/\$8)
        ',)6AA&\"+)! "#$%\\'()6/$\BC\\C;)>3\!C3L\RC3O\!
',)6@.&C7)$/+)N''%''8'A7''/.$8)N&C$2&8&.&''C;)>4;!"3LOR"3D"0!
78-, %9A! 46!56!W23"3Y6!! .:!;&-+<!-FF-'+&U-(?!+%-,+!,$+&<) n!6I!6)S"A'(."(A!"]6!
G-\%-(8N:A!@6A!B, '.:9,(;A!O6X6V6A!g!78-,\%9A!4656!W23"3Y6!
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!
X-((-+&-%A!_6A!B'H,), %, A!S6A!S%, K, R_-9?:9A!X6A!g!78-, %9A! 4 65 6!W23"3Y6!JFF-'+!:F!U&;-:!<-(FR):9&+:%&9K!:9!M%:'-;$%,(!&9+-K%&+?6!!"#$%&'($8)J/."(%"/.&'/C;)3P;!2="R2CD0!!

X, %%?R#%$ I ?<A!. 6J6A!H-,(A!#6B6A!78-, %9A! 4 65 6A! 4 8--(-%A!J6A!X%-)'8,9;-%A!O6A!@:-QA!B6A!g!.$Q-A! 4 6*6!
W23""Y6!!O-<&<+,9'-!+:!. &<%$M+&:9!&9!,!#(,<<%::)!P-++&9K6!?'@(/$8)',)6AA8&"+)!"#$%&'()6/$8BC&C0!!
B, 8:9-?A!76B6A!B&K$-(A!#6V6A!78-, %9A! 4 65 6A!g!S-((A!a6!W23""Y6!!G8-!%:(-!:F!':)):9!):+:%!59Tm/TTQq0.24000
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11 11

: . &'N<: 9A!#676A!B, '.: 9,(;A!O6X6V6A!B,9<F&-(;A!O6A!b\$&(8,%;&A!X6A!a:89<: 9A!#6A!g!78-,%9A!4656!W23"DY6!

"2

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#&'':9-A!V6a6A!b%, FFA!O6S6A!g!78-,%9A!4656!W23"]Y6!`9'%-,<&9K!+8-!-FF&'&-9'?:F!M,&%-;R<+&)$($<!
                M\%-F-\%-9'-!, <<-<< ) -9+<!Q?!\&; -9+\&F?\&9K!', +-K: \%\&-<!:F!M\%-F-\%-9'-6!a:$\%9,(:F!7MM(\&-;!S-8,U\&:\%!-K:\%B-<!:F!M\%-F-\%-9'-6!a:$\%9,(:F!7MM(\%-;!S-8,U\%:\%!-K:\%B-<!:F!M\%-F-\%-9'-6!a:\%\%|-K:\%B-<!:F!M\%-F-\%-9'-6!a:\%\%|-K:\%B-<!:F!M\%-F-\%-9'-6!a:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:\%\%|-K:
                 79,(?<&<D>A!22"R22=6!
 B, '.: 9, (; 4!a64! g! 78-, %94! 4 65 6! W23" ] Y6! G-, '8 & 9 K! : Q <- \U, + & : 9, (!(-, \%9 & 9 K! +: !'8 & (; \%-9! I & + 8!, \$+ \& <) 6!
                a: \$\%9, (!:F!7MM(\&-;!S-8,U\&:\&!79,(?<\&<A!D>A!>33R>"=6!
 B, '... 9, (; AO6X6V6A! . \& 'N < : 9A! #676A! B, M+&9-, $A! B 6A! g! 78-, M9A! 4 656! W23"] Y6! XM-M-i $& <&+-! < N&((<!+8,+!) + 1.5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .
                <\$ MM : \$+!(-\ ,\$ 9\&9K!+8\% :\$ K8!U\&; -:!\ ) : ; -(\&9K6!\ J\ ;\$'\ ,+\&:9!\ ,9\ ;!G\$-\ ,+\ ) \ -9+!:F!\#8\&(\ ;\$-9A!L>A!LLRDC6!)
 B, 'B, 9$<A!#6A!B, '.:9,(;A!O6X6V6A!g!78-,%9A!4656!W23"]Y6!G-, '8&9K!,9;!K-9-%,(&^&9K!M%-+-9;!M(,?!&9!
                   '8&(;%-9!I&+8!,$+&<)!$<&9K!U&;-:!):;-(&9K!,9;!),+%&Z!+%,&9&9K6!S-8,U&:%,(!`9+-%U-9+&:9<&!L3&!"O"R
                2">6!
 B::%-A!_6B6A!#&U&;&9&RB:++,A!#6A!#(,%NA!_6B6A!g!78-,%9A!4656!W23"]Y6!P-9<:%?!&9+-K%,+&:9!,<!,!
                +\%-,+)-9+!F:\%!,\$+:),+\&',((?R),\&9+,\&9-;!<+-\%-:+?M?6!S-8,U\&:\%,(!^9+-\%U-9+\&:9<A!L3A!O]R''''6!
X, I - (A!76764!78 - M94!46564!g! #:8-94!P6a6!W23"]Y6!O-':) Q&9, +&U-!K-9-M, (&^, +&:9!:F!+, '+<!+8M:$K8!
                   ), +\&Z!+\%, &9&9K! I &+8!&9; &U&;$,(<! I &+8!,$+&<)!<M-'+\$)!; &<:\%; -\%!G8-!79,(?<&<!:F!*-\%Q,(!S-8,U&:\%!
                L"A233\2"D6!
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                                                                   M%-<-9+-;!,+|+8-!2!"!,99$,(!':9U-9+&:9!:F!+8-!7<<:'&,+&:9!:F!X%:F-<<&:9,(!S-8,U&:%!
                                                                    79.(?<+<A!G.) M.A!V@6!
B. %6A!23"2!!
                                                                    #,((!F:%!&9;-M-9;-9'-!F%:)!M<?'8:(:K?6! -?9:+-!,;;%-<<!K&U-9!,+!+8-!,99$,(!':9F-%-9'-!
                                                                    :F!+8-!X-99<?(U,91,17<<: 11,14:9!F:18-8,01:19,0!79,0!7<6.15-18-8-18-18-19.01
V-06A!23"2
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- B, %6A!23""! G8-!-(\$<&U-9-<<!:F!Q-<+!+-, '8&9K!M%, '+&'-</!O-<-, %'8!&9!+8-!+%-9'8-<6!G, (N!K&U-9!, +!+8-! ,99\$, (!':9F-%-9'-!:F!+8-!X-99<?(U, 9&,!7<<::'&,+&:9!F:%!S-8, U&:%!79, (?<&<A!5-%<8-?A!X76!
- V-Q6A!23""! S-<+!M%, '+&'-</!O-<-, %'8!&9!+8-!+%-9'8-<6!`9U&+-;!,;;%-<<!,+!+8-!,99\$,(!':9F-%-9'-!:F!+8-! #,(&F:%9&,!7<<:'&,+&:9!F:%!S-8,U&:%!79,(?<&<A!P,9!V%,9'&<':A!#76!
- $a\$(64!23"3! \quad H:!-,<?!,9<I-\%<!F:\%!<+-\%-:+?M?/!7!":) \\ M\%-8-9<\&U-!,MM\%:,'8!M\%:):+\&9K!F\$9'+\&:9,(!<N\&((<6!P-<<\&:9!M\%-<-9+-;!,+!+8-!7\$+\&<)) \\ P:'\&-+?!:F!7)-\&',!':9F-\%-9'-A!.,((,<A!Gq6!P-<<&:9!M\%-<-9+-;!,+!+8-!7\$+\&<)) \\ P:'\&-+?!:F!7)-\&',!':9F-\%-9'-A!.,((,<A!Gq6!P-</p>$

- a\$96\!2330! V\\(\): \) !U: \(\), (!\(\)+\\\\)-: \(\)+?M?!\(\): \(\)!U-\\\\Q\), (!\(\)Q-8\, U\\(\): \(\)\(\)6! 4: \(\)N\(\)8: M!\(\): \(\)9;\(\)\$\(\)'+-;!\(\), \(\)!+\(\)8-!\(\), \(\)\(\)-9\(\)<f!\(\)J\(\)7\(\)\$\(\)\(\)}\(\). \(\)!': \(\)9F-\(\)-9\(\)-\(\)!': \(\)9F-\(\)-9\(\)-\(\)4!\(\)\(\)-(\(\)9;\(\)6!\(\)}\(\)-(\(\)9;\(\)6!\(\)

- 7 \$K6\!233>! G\', 9<\(, +\'9\K!\'\)-<-, \('\'8!\+: !M\'\, '+\'\'-!, 9\; !M\'\, '+\'\'-!\+: !\'\-<-, \('\'86!X\), M-\('\'1\'\)-\('\'1\'\)+\('\'1\'\)-\('\'1\'\)+\('\'1\'\)-\('\'1\'\)+\('\'1\'\)-\('\'1\'\)+\('\'1
- B, %6A!233>!

- $\begin{array}{l} PU-\&9Qc: \$9<; :++\&\$A!S6A! . \&'N<: 9A!\#676A! \ g ! 78-, \$9A! \ 4 \ 65 \ 6! \ WB \ , ?!23""Y6!7'+\&U\&+?!+\$ \ , 9<\&+\&: 9<! \ , 9; \ !M\$: Q(-)! \\ Q-8, U\&: \$!\&9!<M-'\&, (!-;\$',+\&: 9!'(,<<\$::)< 6!X \ , M-\$!M\$-<-9+-;! \ , +!+8-!LC^{\$}! \ 7 \ S \ 7^! \ 7 \ 99\$ \ , (!\#: 9U-9+\&: 9A! \ . \ -9U-\$A!\#E6!! \\ \end{array}$

- #&U&;&9&RB:++,A!#6A!#(,%NA!_6B6A!g!78-,%9A!4656!WE'+:Q-%!23"3Y6!.&FF-%-9+&,(!%-&9F:%'-)-9+!:F!

 M%:)M+-;!,9;!&9;-M-9;-9+!%-<M:9<-</!79!,(+-%9,+&U-!M%:'-;\$%-!+:!;-'%-,<-!M%:)M+!;-M-9;-9'?6!

 X,M-%!M%-<-9+-;!,+!+8-!S-%N<8&%-!7<<:'&,+&:9!F:%!S-8,U&:%!79,(?<&<!,9;!G8-%,M?A!7)8-%<+A!B76!
- #::NA!G6A! g!78-,%9A! 4656A!WE'+:Q-%!23"3Y6!#:) M,%&9K!-'8:&'!,9;!+-Z+\$,(!M%:) M+<!F:%!+-,'8&9K! &9+%,U-%0,(!Q-8,U&:%6!

"C

- $O: Q\&9<: 9A! \ B \ 6J \ 6A! \ . \ \&'N<: 9A! \# 67 \ 6A! \ B \ , \ . \ . : 9, (;A!O6X6V6A! \ g!78-,\%9A! \ 4 \ 65 \ 6!W \ B \ , ?!23"3Y6!X\%-\%-i \&\&\&+-!<N\&((<!F:\%!(-,\%9\&9K!+8\%:\$K8!U\&;-:!): ;-(\&9K/!\%:(-!:F!;-(,?-;!\&)\&+,+\&:9!,9;!;-(,?-;!))+'8\&9K"!X,M-\%!M\%-<-9+-;!,+!+8-!,99\$,(!':9F-\%-9'-!:F!+8-!7<<: '\&,+\&:9!F:\%!S-8,U\&:\%!79,(?<&<A!P,9!79+:9\&:A!Gq6!)$
- O:; %&K\$-^A!H6B6A!G8:) M<:9A!O656A!P'8(&'8-9)-?-%A!_6a6A!P+:'':A!#6P6A!g!78-,%9A!4656!WB,?!23"3Y6! 7<<-<<)-9+!,9;!+%-,+)-9+!:F!,%%,9K&9K!,9;!:%;-%&9K!&9!&9;&U&;\$,(<!I&+8!,\$+&<)6!X,M-%!M%-<-9+-;!,+!+8-!,99\$,(!':9F-%-9'-!:F!+8-!7<<:'&,+&:9!F:%!S-8,U&:%!79,(?<&<A!P,9!79+:9&:A!Gq6!
- P&9'(,&%A!X676A!B'PI--9-?A!B6A!g!78-,%9A!4656!WB,?!23"3Y6!7<--<<)-9+!,9;!+%-,+)-9+!:F!U:',(! <+-%-:+?M?!&9!,9!,;\$(+!I&+8!)-9+,(!%-+,%;,+&:96!X:<+-%!M%-<-9+-;!,+!+8-!,99\$,(!':9F-%-9'-!:F!+8-!,99*),(!':9F-%-9'-!:F!+9-!*),(!':9F-%-9'-!:F!+9-!*),(!':9F-%-9'-!:F!+9-!*),(!':9F-%-9'-!
- $S8,\%$'8,\&!..6\&!\#\&U\&;\&9\&RB:++,\&!\#6\&!g!78-,\%9\&!4.656!\ WE'+:Q-\%!2330\ Y6!G\%,\&9\&9K!c:\&9+!,++-9+\&:9!\%-<M:9<-<!\&9!+--9,K-\%<!$<&9K!<:'&,(!':9<-i$-9'-<6!X,M-\%!M\%-<-9+-;!,+!+8-!S-\%N<8\&\%-!7<<:'&,+&:9!F:\%!S-8,U\&:\%!79,(?<&<!,9;!G8-\%,M?\&!7)8-\%<+A!B76!$

! "0

- $$\begin{split} &J((\&: ++A!P6A!@\&QQ?A!B6J6A!78-, \$9A!4656A!g!4-\&<<&A!a6P6!WE'+:Q-\$!233>Y6!7;;\$'+\&:9/!b-9-\$, +\&9K!9:U-(!\$-<&M:9<-<&6!X,M-\$!M\$-<-9+-;!,+!+8-!S-\$N<&\&\$-!7<<:'\&,+\&:9!F:\$!S-8,U\&:\$!79,(?<&<!,9;!G8-\$,M?A!7)8-\$<+A!B76! \end{split}$$
- b%\delta\gamma\; (-\alpha\left!P,\%K-9+\alpha\left!J\) \delta\left! \, \delta\; (\alpha\left!P,\%K-9+\alpha\left!J\) \delta\; \de
- @-Q: I &+^A!a6@6A!#(,%NA!_6B 6A! g!78-,%9A! 4 656!WE'+:Q-%!233>Y6!G8-!-FF-'+<!:F!U-%Q,(!:M-%,9+!+%,&9&9K! g!%-<M:9<-!&9+-%%\$M+&:9!%-;&%-'+&:9!:9!,MM%:M%&,+-!g!\$9;-<&%,Q(-!U:',(&^,+&:9<6!X:<+-%!M%-<-9+-;!,+!+8-!S-%N<8&%-!7<<:'&,+&:9!F:%!S-8,U&:%!79,(?<&<!,9;!G8-%,M?A!7)8-%<+A!B76!
- B ,8:9-?\!X\6\! 4 -\&<<\!a6P\6\!\@\&QQ?\!B\6J\6\!\g\!78-,\\9\!\4\65\6\!\E'+:Q-\\!233>\Y\6\!79,(?<\&<!:F!M\\:) M+\&9K!-\\\:\\<! +8,+!\\-<\\$(+!\&9!;-(,?-;!,'i\$\&<\\+\&:9!:F!M(,?!<\\&((!'8,\&9<!\&9!'8\&(;\%-9!I\\&+8!,\\$+\&<)\6!X,M-\%!M\\-<-9+-;!,+!+8-! S-\\N<\&\\%\-!7<\<:'\\\,+\\\:\\$\!S-8,U\\:\\!79,(?<\\&<!,9;!G8-\\,M?\\!7) 8-\\<+\\!B7\6!
- B::%-A!_6A!.,<89-%A!a6A!#(,%NA!_6B6A!g!78-,%9A!4656!WE'+:Q-%!233>Y6!JFF-'+<!:F!<-9<:%?!&9+-K%,+&:9!:9!, +:),+&',((?!%-&9F:%'-;!):+:%!,9;!U:',(!<+-%-:+?M?6!X:<+-%!M%-<-9+-;!,+!+8-!S-%N<8&%-!7<<:'&,+&:9!F:%!S-8,U&:%!79,(?<&<!,9;!G8-%,M?A!7)8-%<+A!B76!
- O:Q&9<:9A!B6J6A!#(,%NA!_6B6A!g!78-,%9A!4656!WE'+:Q-%!233>Y6!G8-!-FF-'+<!:F!U-%Q,(!:M-%,9+!+%,&9&9K!:9!+8-!U:',(!<+-%-:+?M?!,9;!,MM%:M%&,+-!(,9K\$,K-6!X:<+-%!M%-<-9+-;!,+!+8-!S-%N<8&%-!7<<:'&,+&:9!F:%!S-8,U&:%!79,(?<&<!,9;!G8-%,M?A!7)8-%<+A!B76!!!!
- $\begin{array}{l} O: Q\&9<: 9\&1 B 6J 6\&1 B \text{, '} .: 9, (; \&1O6X6V6\&1 g ! 78-, \&9\&1 4 656!WE '+: Q-\&1233>Y6!JZM(: \&2V!, !M: <<&Q(-!\&-(,+\&:9<8\&M!Q-+I--9!;-(,?-;!),+'8R+:R<,) M(-!,9;!M-\&F:\&), 9'-!: 9!U\&;-:!): ; -(\&9K6!X: <+-\&!M\&-<-9+-;!,+!+8-!S-\&N<8\&\&-!7<<: '\&,+\&:9!F:\&!S-8, U\&:\&!79, (?<&<!,9;!G8-\&,M?\&!7) 8-\&<+\&!B 76! \end{array}$
- $4 \& ((\&F:\%;A:G6A:\#(,\%NA!_6B:6A:g:78-,\%9A:A:65:G!WE'+:Q-\%:233>Y6:G8-!-FF-'+<!:F!<:'\&,(!\%-\&9F:\%'-)-9+!:9!+8-!,'i$\&<\&+\&:9!:F!<:'\&,(!<N\&((<!F:\%!'8\&(;\%-9!I\&+8!,\$+\&<):G!X:<+-\%!M\%-<-9+-;!,+!+8-!S-\%N<8\&\%-!7<<:''\&,+\&:9!F:\%!S-8,U\&:\%!79,(?<&<!,9;!G8-\%,M?A!7)&8-\%<+A!B76! !!$
- 78-, %9A! 4656!\(\mathbb{\text{B}}\), ?!233>\(\frac{1}{2}\); \(\frac{1}{2}\), \(\frac{1}\), \(\frac{1}{2}\), \(\frac{1}{2}\),
- $78-, \$9\$! \ 4656! \$B, ?!233> \$6!! y S6 \$6! P \$89-\$!(-'+\$\$-y! j \$, 9+\$F?\$9K! +8-! i \$, (\$+, +\$U-/! J) M \$\% \&', (!) -, <\$\%-<!:F! <: '\&, (!\&9F:\%) , +\&: 9!M\%: '-<< \&9K! \&9!, \$+\&<) 6! '9U \&+-;!, ;; \%-<<!'8, &\partial -;!, +!+8-!, 99\$, (!': 9U-9+&: 9!: F!+8-! 7<<: '\&, +\&: 9!F: \partial !5-8, U \&: \partial :79, (?< \&< A! #8 &', K: A!` @6!!$
- 78-, %9A! 4656!WB,?!233>Y6!!JZ,) &9,+&:9!:F!;,+,!,9,(?<&<!)-+8:;<6!P?) M:<&\$)!;&<'\$<<-;!,+!+8-!,99\$,(!':9U-9+&:9!:F!+8-!7<<:'&,+&:9!F:\%!S-8,U&:\%!79,(?<&<A!#8\&',K:\A!\@6!!
- 78-, %9A! 4656!\(\mathbb{B}\), ?!233>\(\frac{1}{2}\)(G\(\partial_{
- $\#: (:9A!\#6A!78-,\%9A!4656A!\#(,\%NA!_6B6A!g!B,<,,(<N?A!a6!\%B,?!233>Y6!!G8-!-FF-'+<!:F!+,'+!+\%,\&9\&9K!,9;!\\ \%-<M:9<-!\&9+-\%\%M+\&:91\%-;\&\%-'+\&:9!:9!,MM\%:M\%\&,+-!,9;!$9;-<&\%,Q(-!U:',(\&^,+\&:9<6!X,M-\%!M\%-<-9+-;!,+!+8-!,99\$,(!':9U-9+\&:9!:F!+8-!,7<<:'&,+&:9!F:\%!S-8,U\&:\%!79,(?<&<A!\#8\&',K:A!^@6!$

- 78-, %9A! 4656!W7\$K\$<+!233CY6!! . -<'%&M+&U-!,9;!-ZM-%&)-9+,(!,9,(?<-<!:F!'%&+&',(!':)M:9-9+<!:F!J`S`!F:%!'8&(;%-9!I&+8!7P.<6!P?)M:<&\$)!'8,&%-;!,+!+8-!D+8!`9+-%9,+&:9,(!#:9F-%-9'-!:F!+8-!7<<:'&,+&:9!F:%!S-8,U&:%!79,(?<&<A!P?;9-?A!7\$<+%,(&,6!
- 78-, %9A! 4656A! #(, %NA!_6B6A!B, <, (<N?A!a6A! g!_&9K-%?A!P6!W7\$K\$<+!233CY6!*:',(!<+-%-:+?M?A!%-i\$-<+&9KA!, 9;!':))-9+&9K/!V%:)!M\$%-(?!U:',(!+:!U:',(!U-%Q,(!Q-8,U&:%6!X,M-%!M%-<-9+-;!,+!+8-!D**!`9+-%9,+&:9,(!#:9F-%-9'-!:F!+8-!7<<:'&,+&:9!F:%!S-8,U&:%!79,(?<&<A!P?;9-?A!7\$<+%,(&,6!
- 78-, %9A! 4656!WE'+: Q-%!233CY6!!X-%<: 9, (!M, %,; &K)!<8&F+<!,9;!+%-,+)-9+!, ''-M+, Q&(&+?/!7!':) M, %&<: 9!:F! XSP!,9;!7S7!-ZM-%+<6!E%, (!M%-<-9+,+&:9!'8,&%-;!,+!+8-!S-%N<8&%-!7<<: '&,+&:9!F:%!S-8, U&:%!79, (?<&<!,9;!G8-%,M?A!7)8-%<+A!B7!
- 78-, %9A! 4656!WE'+: Q-%!233CY6!!O-F&9-) -9+<!&9!&9+-%: Q<-%U-%!, K%--) -9+!; ,+,!,9,(?<&<A!F\$9'+&:9,(!,9,(?<&<A!M%-F-%-9'-!,<<-<<) -9+A!,9;!+%-,+) -9+!: F!M%: Q(-)!Q-8, U&: %6!P?) M:<&\$)!'8, &%-;!,+!+8-! S-%N<8&%-!7<<:'&,+&:9!F:%!S-8, U&:%!79,(?<&<!,9;!G8-%, M?A!7) 8-%<+A!B 76!
- 78-, %9A! 46!56A!#(, %NA!_6!B6A!#8\$9KA!S6A!b, %; -9&-%A!H6A!g!B,'.:9,(;A!O6!WB,?!233LY6!G%-,+&9K!U:',(! <+-%-:+?M?!I&+8!%-<M:9<-!%-;&%-'+&:9!,9;!<+&)\$(\$<!':)M-+&+&:96!X,M-%!M%-<-9+-;!,+!+8-!,99\$,(!':9U-9+&:9!:F!+8-!7<<:'&,+&:9!F:%!7MM(&-;!S-8,U&:%!79,(?<&<A!P,9!V%,9'&<':6!
- $\#(,\$NA!_6!B6A!V(:\$-9+\&9:A!\#6A!G::)-?A!J6A!^<:9:A!e6A!B-+^K-\$A!a6A!g!78-,\$9A!46!56!\mathbb{B},?!233LY6!\\ \#:)M,\$\&<:9!:F!8\&K8(?!M\$-F-\$\%-;!),+'8-;!,9;!\$9),+'8-;!<+\&)\$(\&!:9!<+-\$-:+?M?!\&9!<+\$;-9+<!I\&+8!\\ ;-U-(:M)-9+,(!;\&<,Q\&(\&+\&-<6!X:<+-\$!M\$-<-9+-;!,+!+8-!,99\$,(!':9U-9+\&:9!:F!+8-!7<<:'\&,+\&:9!F:\%!7MM(\&-;!S-8,U\&:\%!79,(?<&<A!P,9!V\,9'&<':6!$
- $78-, \$9A! \ 46! \ 56!! \ WH: U-) \ Q-\$! \ 2332 \ Y6!! \ J\ , +\&9K! \&9!' \ 8\&(;\$-9! \ I\ \&+8!,\$+\&<) \ !< M-'+\$\$) \ !;\&<:\$;-\$/! . \&\$-'+!,9;! \ 9,+\$\$, (\&<+\&'!,<<-<) \ -9+!<+\$,+-K\&-<6!! \ M-\$! \ M-*! \ M*-<-9+-;!,+!+8-!`9, \$K\$\$, (!4:\%(;!7\$+\&<) !\#:9F-\$-9'-A! \ B-(Q:\$\$9-6!)$
- 78-, %9A! 46!56!WE'+:Q-%!2332Y6!!.-'%-,<&9K!U:',(!<+-%-:+?M?!&9!&9;&U&;\$,(<!I&+8!,\$+&<)6!X,M-%!M%-<-9+-;!,+!+8-!,99\$,(!)--+&9K!:F!+8-!S-%N<8&%-!7<<:'&,+&:9!F:%!S-8,U&:%!79,(?<&<!,9;!G8-%,M?A!7)8-%<+A!B76!

- B::%-A!G6A!a:89<:9A!#6A!g!78-,%9A! 4656!!G8-!-FF-'+<!:F!,!<-(FR),9,K-)-9+!+%-,+)-9+!M,'N,K-!:9!+8-!

 <+-%-:+?M&'!Q-8,U&:%!:F!,!?:\$9K!),9!I&+8!,\$+&<)6!!X:<+-%!M%-<-9+-;!,+!+8-!,99\$,(!)--+&9K!:F!+8-!

 S-%N<8&%-!7<<:'&,+&:9!F:%!S-8,U&:%!79,(?<&<!,9:!G8-%,M?A!7)8-%<+A!B76!
- 78-,%9A! 46!56A! g!.-Q,%A!O6!!WB,?!2332Y6!G8-!-FF-'+<!:F!:M-9!,9;!'(:<-;!-':9:)&-<!:9!M-%F:%),9'-!&9!, +'8&9KR+:R<,) M(-!+,<N6!X:<+-%!M%-<-9+-;!,+!+8-!,99\$,(!':9U-9+&:9!:F!+8-!7<<:'&,+&:9!F:%!7MM(&-;!S-8,U&:%!79,(?<&<A!G:%:9+:6!
- $78-, \$9A! \ 46!56A! \ .\ \$Q-6! \ 46!*6A!B \ ``(U,9-A! \ 46!a6A!\#(,\$NA!_6!B6A!g!b,\$;-9\&-\$A!H6!\#6!\$B,?!2332Y6! \ .\ \&<\$M+\&9K! \ <+-\$-:+?M?! \ I \&+8!*G!<+\&) \ \$(\$<!;-(\&U-\$?/!7!+-<+!:F!Q-8,U\&:\$,(!):)-9+\$) \ 6!X,M-\$!M\$-<-9+-;!,+!+8-!,99\$,(!):9U-9+\&:9!:F!+8-!,7<<:'\&,+\&:9!F:\$!7MM(\&-;!S-8,U\&:\$!79,(?<&<A!G:\$:9+:6!)$

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- *+"#, -&'.)!)'87#%'9:::<)'=00"N?'C0'?QC'B"?+C@A'C0'5-?,C@FN5-0'0CC@A'C-'#NN"P?#-N"'C0'P, "G5CFA\$%', "E"N?"@'5?"BA)'R#P", 'P, "A"-?"@'#?'?+""#--F#\$'B""?5-0'C0'?+"'*AACN5#?5C-'0C, '2"+#G5C, '*-#\$%A5A&'... #A+5-0?C-&'X)Y)''
- *+"#, -&'.)!)&'Y#\$\$5AC-&'T)&'3'M,?B#-&'7)'8*F0FA?'9:::<)'2"+#G5C,#\$'?,"#?B"-?'C0'0CC@'A"\$"N?5G5?%'5-'#'N+5\$@'Q5?+'#F?5AB)'R#P",'P,"A"-?"@'#?';;th'. C,\$@'YC-0,"AA'C0'?+"'H-?",-#?5C-#\$'*AACN5#?5C-'0C,'?+"'VN5"-?505N'V?F@%'C0'H-?"\$\$"N?F#\$'X5A#65\$5?5"A&'V"#??\$"&'. *)'
- 78-, %9A! 46!56!WB,?!2333Y6!JFF-'+!:F!+I:!)-+8:;<!:F!&9+%:;\$'&9K!F::;<!:9!,''-M+,9'-!:F!!

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 79,(?<&<A! 4,<8&9K+:9A!.6#6!!
- x,(-<N, A! 76A! b:\$(;A! . 6! . 6! g! 78 ,%9A! 4 6! 56!WE'+:Q-%!2333Y6!^9+-%<M-%<,(!M%:'-;\$%-/!P?<+-),+&'!
 %-M(&',+&:9!:F!M%-U&:\$<!%-<-,%'86)X:<+-%!M%-<-9+-;!,+!+8-!,99\$,(!)--+&9K!:F!+8-!S-%N<8&%-!7<<:'&,+&:9!
 F:%!S-8,U&:%!79,(?<&<!,9;!G8-%,M?A!7)8-%<+A!B76!
- 78-, %9A! 4656A! g!X:++-%A!X6!WE'+:Q-%!"000Y6! J<+,Q(&<8&9K! I-&K8+!K,&9!&9!,!F,&(&9KR+:R+

- 78-, %9A! 4656! g!5&9-(&9-A!X6H6!WB,?!"00LY6!VO!U-%<\$<!*O!<'8-;\$(-</!7!+-<+!:F!K-:)-+%&'!,U-%,K&9K!,<!, !M%-;&'+&U-!;-<'%&M+:%!:F!'8:&'-6!X,M-%!M%-<-9+-;!,+!+8-!,99\$,(!)--+&9K!:F!+8-!7<<:'&,+&:9!F:%!S-8,U&:%!79,(?<&<A!#8&',K:A!`@6!
- 78-, %9A! 4656!WB,?!"OOLY6!P'&-9'-A!M<?'8:(:K?A!,9; |&9+-%M%-+&U-!Q-8,U&: %&<) 6!X,M-%!M%-<-9+-;!,+!+8-!,99\$,(!)--+&9K!:F!+8-!7<<: '&,+&:9!F:%!S-8,U&:%!79,(?<&<A!#8&',K:A!`@6!
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- $78-, \$9 \$! \ 4656 \$! \ 5\$9-(\$9-\$! X6H6 \$! \ g! \ . \ , U\&; \$! V6 b 6! \ W"OO" Y6! X \$-F-\$-9'-! F: \$! \% \ N! \& 9! < \& +\$ \ , +\& : 9 < !: F! \$9'-\$+, \& 9 + ?6!! \\ X, M-\$!; -(\$U-\$-; !, +!+8-!, 99\$, (!) --+\& 9K! : F! +8-! \ J, <+-\$9! X < ?'8: (: K\&', (!7 <<: '\&, +\& : 96!)$

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