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, %-./0 1 %&0!23!45#$262-5+!
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45(,(!C45#$262-5+D;!M&#R%/6#0+!23!N%S.6!.0!=960#&(!!N5%6#6T!U=V9#&.6¶!Q20#2&!23!)K#%&K%U!!
!
<(=(!C45#$262-5+D;!M&#R%/6#0+!23!N%S.6!.0!=960#&(!!
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               N(!) * \%\% \&\% + !C\#\&! - /\% - . / .0\#2\&D(!)
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=/0#K$%6T!
 U = V9\#\&.6\%N5/\%\%!\%R\%\$6!23! \; , \; \#R\#\&\%!4/\%L\#K.0\#2\&!\#\&! \; , \; .\&0\%\%6! - "4")/.0; \\ U!50!/6"6".; \\ ! \; j \; 2\$(!@A!C@\HED;!)/.0; \\ U!50!/6"6".; \\ U = V9\#\&.6\%N5/\%\%!\%R\%\$6!23! \; , \; \#R\#\&\%!4/\%L\#K.0\#2\&!\#\&! \; , \; .\&0\%\%6! - "4")/.0; \\ U!50!/6"6".; \\ U!50!/6".; \\ U!50!/6"
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- ,/(O.OM, 98!] %#k2!N+f/#&2k.;!=&k.!0&`%/#![%50#&%&;!,.83#&&!Y1$$%6L.$;!%L6(;!C:%$6#&`#T!
               =&&.$6!23!05%!Y#&&#65!)2K#%0+!32/!<#66#2$28+!.&L!"K91%&#K6;!@\\>D;!j2$(!1;!--(!@A?F
               @B>(!
UY/21!, %0%/1 #&%L! < 20#2&!02!M&L%0%/1 #&%L! a #$$!.&L!Q.09/%!02!) 9 - %/&.09/%!#&!=V9#&.6;U!
               - ,/(O.OM, /&"(%+OM/&.;!?>;!?;!CY.$$!@\\?D;!--(!@H\F?@d(!
U=V9#&.6\!, 29J\%! < \%0.-5+6\#K6!23!)\#1-\$\#K\\#0+!.\&L!0\&3\#\&\#0+;\U!C\$6\*4\$''6\O\$''(\%-,\/(O.OM,\&''(\%-
               N'''46*4(9;!GG!C)\%-0\%1J\%/!@\GD;!--(!?\BFG@B(!)
U]%*/#0#&8!05%!Q.//.0#R%!23!)K/#-09/\T!@?05!'%&09/+!,%J.0%6!PR%/!]%.62&!.&L!N5%2$28#K.$!
               Y2/1;U!D*)/*F''(\%-,/(0.0M,9\%''\$)\%+,*0(0#9;!G;!C@\setminus GD;!--(!@FGd(!))
UN5/\%, Q20\#2\&6!23!=\&.\$+6\#6!CA*.O('6/OD!.\&L!05\%!)O/9K09/\%!23!]%.62&#&8!#&!=V9#&.6;U!+,*%
               +, O! / .6;!EH;!?;!C = -/\#\$!@ \setminus dD;! - -(!@ \setminus BF?dG(!))
U: 985!23!)0(!j#K02/T!N5%!=98960#&#.&!N/.L#0#2&!23!).K/%L!.&L!)%K9$./!]%.L#&8!]%R#6%L;U!#&!
               A*")/$#\"$)\\=/.)0!<\\+,*\\>0&64/$"\\5,4/.6/"$"\\0!\\3'#'.6/$*\\$\\6,*\\D/))(*\\3#*.8!\\L(!
               "L*./L!,(!"&8$#65;!M&#R\%/6\(\pi\)+!23!Q20\\%!,.1\\%!4\\%66;!\@\\E;!--(!A\(\text{QFHG}(!)\)
U)9--26#0#2&;!)#8&#3#K.0#2&;!.&L!M&#R%/6.$6T!<\( \)0.-5+6#K.$!.&L![#&89#60#K!'21-$\( \)5#0+!#&!
               =V9#&.6;U!G4*/; '4#*4%0*/6.&,4/16\\!IP4\\rightarrow-,/(O.OM,/\*\\'$)\\\rightarrow+,*O(O\(\pi\/\*\);!d?;!:\\\80!G;!C@\\\ED;!--(!
               ?ABF?\>(!
U0&L#R#L9.0#2&!.&L!05%!72L+!#&!=V9#&.6;U!D/.&*(("$*"%D*)/"*F"(/";!R2$(!?d!C@\\AD;!--(!@BHF@\A(!
               C]%-/#&0%L!#&!D*)/*F"(%-,/(O.OM,9;!d!R2$6(;!R2$(!@;!<#&L;![28#K;!.&L![.&89.8%(!"L#0%L!J+!
                '5/#60#&.!i.&!,+`%!.&L!=&L/%*!a(!=/$#8;!!'/#0#K.$!'2&K%-06!#&!45#$262-5+!)%/#%6;!
               ] 290\%L8\%;!?>@\;!@BHF@\A(D!
U ] %60/9K09/#&8!, %6#/%T!!=V9#&.6;!, %6K./0%6;!.&L!: 2JJ%6!2&!05%!4.66#2&6;U!#&!D**6/$#%01%, *%
               D/$).;!)0%-5%&!Y(!7/2*&;!%L(;!]%&K2&0/%6!L%!45#$262-5#%!<%L#%R.$%;!B;!CN29/&5290T!!
               7/\% - 2\$6;!@ \setminus HD;! - -(!?@ \setminus FGB(!)
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U=&6%$1!9&L!L%/!,#.$28(!,#60.&i!9&L!j%/6f5&9&8;U!!#&!O*.M4R&,*%*.*$%-,/(0.0M,/.&,*%
              >/"(0#*\\! \ND\\)66*("\(6*4\)(!e\$.96\!b.K2J\#\!.&L\!<\#6K5.\!R2&\!4\\/8\\\/\!\\L\(!\NmJ\#\&8\\&T\!_9\&0\\/!\\D\.\/!
              i %/$.8!@\\\:!--(!@>@F@?d(!
U=J%$./Ln6!4/28/%66T!!Y/21![28#K!02!"05#K6;U!C$6*4$"6/0$"(\%-,/(0.0M,/&"(\%N'"46*4(9);!d>!
              C)%-0%1J%/!?>>>D;!--(!GABFBA(!
oP/L%/#&8!, #33%/%&K%6T!!=V9#&.6!R6(!05%!<2L%/&6;p!#&!3T'/$".\\\\5*\$6*4\\\01\\\+,*0(0\\\9\\\U&&"./0\$"(\)\
              - "M*4. "IO$\\(6\), *\\(5\) "6, O(\&\\C\$6*((*\&6'\)"(\\7/1*;!\&2(!\d(!!=0\$.\&0.\T!!\) 12/+!\M\&\#R\\/6\#0+;!?>>@;!--(!EF
              ?d(!
U=V9#&.6!2&! j #K%!.&L!)#&;U!#&!+, *%K6, /&. %O!\\3T'/\$''.(!!)0\\"-5\\&!b(!42-\\";!\\L(!! a .65\\\&802\\";!, (! '(T!!))
              _%2/8%02 * &!M&#R%/6#0+!4/%66;!?>>?;!--(!@E@F@AH(!
U[#0%/./+!Y2/16!23!<%L#%R.$!45#$262-5+;U!+, *%E6"$104)%K$&9&(OM*)/"%01%-,/(O.OM, 9!Ca#&0%/!
              ?>>?%L#0#2&D("L*./LQ(^.$0.C%L(D;M][q500-Thh-$.02(60.&32/L(%L9h./K5#R%6h*#&?>>?h%&0/#%
              6h 1 %L#%R.$F$#0%/./+h(!C] %R#6%L!.&L!%S-.&L%L;!?>>B;!?>@?;!?>@\D!
U) -%K9$.0#R%!N5%2$28+!.&L!05%!N/.&632/1.0#2&!23!)%-./.0#2&!.&L![2&8#&8;U!#&!-.9&,*%"$)\\\EM\/4/6\\
              V>/"(*&6/&.\|01\|\+4"\$.104!\|"6/0\$(!\"L\|\01\|\L!\]\+!\|5/\|\|6!)\|K5\\\.9\K5!.\|&L!\|a\|\$\\|.1!\< \\|\|\|66\&\\/;!--(!\!@\\F
              ??d(!!M\&\#R\%/6\#0+!23!=1\%/\#K.!4/\%66;!?>>G(!)
U=&6%$ 1 \(\begin{aligned}
\text{1 \(\left\)6\! - 40. (0\text{\(\text{\\circ{\(\text{\(\text{\(\text{\(\text{\\circ{\(\text{\\circ{\(\text{\(\text{\\circ{\(\text{\(\text{\(\text{\(\text{\(\text{\(\text{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\circ{\circ{\\circ{\circ{\circ{\circ{\circ{\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\ciricirc{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\circ{\\c
              M] [q500-Thh***(.&6%1(%L9h$#J/./+h)=bh)=b#&L%S(501$!
UN5\%! ] 5\%02/\#K!23!4/.+\%/!.&L!=/891\%0!\#\&!=\&6\%\$1;U!-,/(0.0M,9\%"\$)\%A,*604/\&!GH;!&(!d!C?>>EDT!
              GEEFBH(!
U=J%$./L\[6!\]W/.604/\[7.5''(''\]!/6''6''\]!.&L!\[%00\%/6T!!\)%\$3!.6!\)%./\[K5!.&L!\]0\[988\[8\];\[U!-O*6\&.\[4.\[4-O\])''9;\[R2\[8]!\]
              ?H(!?!C) 9 1 1 %/!?>>BDT!G>GFGGA(!
oN5%!=6+11%0/+!J%0*%%&![.&89.8%!.&L!7%#&8T!!N5%!'.6%!23!=&6%$1;p!#&!U$\%7"$#'"#*<\\\
              3$"(96/&\%50\$6\$*\$6"(\"\"$)\\\\.604/\&"(\"-*\4.M*\&6/F*.(!!Q\\*K.60\\\T!!'\.1J/\#L8\\!)\\K52\\./6!
              4/%66;!?>>B;!--(!@EBF@BB(!
o) %%#&8!, 29J$%T!N521.6!=V9#&.6!.&L!05%!4/2J$%1!23!<2L%/&#0+!05/2985!05%!'2&0#&%&0.$![%&6;p!
              3! *4/&"$\\\5"6, \O(/\&\\\-, \/(0.0\)M, \\&\\"(\\\N'\"\46\*4(9!\)HG;!G!C?>>\DT!!GH\\Fd?>(!
UN5\%!4/2J\%1!23!45\#\$262-5+!.\&L!N5\%2\$28+!\#\&!=\&6\%\$1!23! '.\&0\%/J9/+;U!\#\&!D*)/*F''(\%-,/(0.0M,9\%)
              "$)\%+, \*O(0\#9\\/$\%6, \*\70\$\#\\D/))(\*\\3\#\\.$\\3\\+4/; '6\*\\60\\E6\*\M, \*\$\\G\\\: 40@\$(!!\\L\\\1\+!\e\\&0!\
              " 1 %/+!.&L! ] 966%$$!Y/%#L 1 . &;!dHBFE@d(!) 09L#%&!9&L!N%S0%!i9/!_%#60%68%6K5#K50%!L%6!
              <#00%$.$0%/6(![%#L%&T!"(!b(!7/#$$;!?>@@(!
o=V9#&.6!2&!05%!)%R%&!,%.L$+!)#&6T!!N/.L#0#2&!.&L!0&&2R.0#2&;p!#&!E/$\/\$\\/$\/D*)/*F''(\'''$)\/K''4(9\)
              DO)*4$\\\5'(6'4\*<\\+, \*\\+4")\\6\O\$\\0\1\\6, \*\E*F*\$\\>*")(9\\E\\$.(!"L(!]\\\K5.\L!_(!Q\\\*5.96\\/!.&L!
              ) 96.&!b(!] #L+./L;!HEF@>A(! r 2/`!<%L#%R.$!4/%66!#&!.662K#.0#2&!*#05!72+L%$$!.&L!7/%*%/;!
              ?>@?(!
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 $o = \&6\% 1!\#\&! \;, \#.\$289\%! *\#05!05\%! P05\% ; p!\#\&!X\$/F*4. "(\%9\%01\%A*".0\$\% - ('4"(\%9\%01\% - , /(0.0M, /*.\/$\%6, *\%D/))(*\%3\#*.; !-40\&**)/\$\#.\%01\%6, *\%YCC6, \%C$6*4$"'6/0$"(\%50$\$#4*..\%- "(*4 ! 0\%Z[\%\\]]\% E*M6*!; *4\%]II^(!j 2\$(!00(@;!--(!@E\F@AH(!"L(!=\%66.\&L/2! < 96K2; !\%0!.\$(;!4..\%/12T)). $((*4...\%/12T)) | (*4...\%/12T) | ($

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o a 5%&!#6!#0! a /2&8s! < 2L%$6!23!=/89 1 %&0! .&L!0&0%/-/%0 .0#2&!3/2 1 !05%!@? !02!05%!@G ! ' %&09/+;p!
              D/. &*(("$*"\\D*)/"*F"(/";!\R2\(!\d>!\C?>@\HDT!\@\FGH(!!
o)#&!.&L!_/.K%;p!#&!3%5"!;4/)#*%50!M"$/0$%60%D*)/*F"(%K6,/&.;!--(!GdHFGB?(!"L#0%L!J+!
              N52 1 .6! a #$$#. 16(!Q% * ! r 2/`T! ' . 1 J/#L8%!M&#R%/6#0+!4/%66;!?>@H(!
o=&6%$1!2&!"R#$!.&L!"9L.#12=p!#&!?*@%A*")/$#.%0l%3$.*(!%0l%5"6*4; '49B.%C$6*((*&6'"(%
              D*6,0).;!--(!@H>F\@(!"(!b(\%7/\#\$\$;!?>??(!
o"05#K6!.&L!)2K#.$!]%$.0#2&6;p!#&!3%5'(6'4"(\\W/.6049\\0]\\C)\*".\\/$\\6, \\D\*)/*F''(\\3#\*(!]2\\(!)!23!3\\
              ?>??;!--(!EGFAH(!!
o[2R%;!05%!4.66#2&6;!]%$.0#2&65#-T!N5%!'2&0/#J90#2&!23!05%!<%L#%R.$![.0#&!N/.L#0#2&;p!#&!
              7*"4$/$#%60%: *\\W'!"$<\\+, *\\-40&*\*)/$#.\\01\%6, *\\YYCb\\=04()\\50$#4\*..\\01\\\-,/(0.0M, 98\\
               : */c/$#8\\dagge 5 , /$''8\\dagge 3 '#' .6\\ZaV]I8\\]IZd(!C32/05\\K2 1 #&8D!
o72%05#.&![28#K!.&L!05%!72%05#.&!4/2k%K0;p!#&!E&,4/16*$\@'4\\Q4\#O4/\"$/`\VGO4.&,'$\#\];!=/6!
              K = \frac{1}{r} . R9i!C K5 * \#iD;!?>@\;!--(!H?F\\(!) K5 * #iD;!?>@\;!--(!H?F\\(!) K5 * #iD;!?>@\;!--(!H?F\(!) K5 * #iD;!?)
oN5%!N/.L#0#2&!23!=33%K0#R%!)-#/#09.$#0+T!Y/21!=&6%$1\"6!4/.+%/6!02!05%!@?05!K(;p!+,*%E''/$6%
              3$. *(!\\\\20'4\$''(;!\R2\$(!\@A;!\\\\20(!\@!CY.\$\\!?>?>DT!d\@FEA(!
o a 5'
                                                             )*$6\\GO4! "6\O$<\\HI\\J*"4.\\OI\\E*4F\&*\\7*"4$\/$#!C32\\05K21#&8D!
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] %$#5 . &;!b2%$! ' (!+ , *% - 4/. O$*4B. % - , /(O. OM, 9<%7/1*%''$) %> *"6 , %/$%: O*6 , /' . B. %5O$. O( "6/O$8% M&#R%/6#0+!23!Q20/%! , . 1 %!4/%66;!?>>B;!#&!A*(/#/O' . %E6') /* . %A*F/*@!GA!CGD!C?>@>DT!?Gd(! e . &8;!) 0% - 5%&(!
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a #05! /%82/+!Y/#%L;!o) %/R#K%! [ %. /&#&8!. &L!05%! "L9K.0#2&!23!Y%%$#&8T! ' 2&0/#J90#2&6!3/2 1 !05%!
                   <#LL\$\!=8\\6!.&L!'2\&0\1-2\.\+!=-\\#K.0\\2\\x;p!<.\\.\\\\#26!'2\\3\\\&K\\\2\\!\5.\.K0\\/!.&L!</pre>
                   j#/09%!#&!05%! '5/#60#. &!N/. L#0#2&;! ] 2 1 %;! < . +!?AF?H;!?>?G(!
oN/. K#&8!05%!4.66#2&6!3/21! < %L#%R.$!02! < 2L%/&!N5#&`%/6;p!:91J2$L0!M&#R%/6#0+;!7%/$#&;! < .+!
                   ?@;!?>?G(!
o = 30\%/! = V9\#\&.6T!) 2 1 %! [ .0\%/! < \%L\#R.\$!, \%R\%\$2 - 1\%\&06!2\&!05\%!4.66\#2\&6;p! ' .n!Y26K./<math>\#R.\%\#R\%/6\#0+;!
                   j %&#K%;!Q2R% 1 J%/!?\;!?>??(!
oN5%!) 29/K%!23! < 2/.$!" R#$T!4.66#2&!R6(!05%! a #$$;p!) 2K#%0v!0&0%/&.0#2&.$%!-29/!$\X09L%!L%!
                   45#$262-5#%! < %L#%R.$%;! a 2/$L! '2&8/%66;!4./#6;!=98960!??F?A;!?>??(!
o = V9 \# \& .6! \ 2 \&! \ 05 \%! \ 4 .66 \# 2 \& 6! \ \# \&! \ '2 \& 0 \% S0T! \ 4 \% K9 / 62 / 6! \ . \& L! \ Y2 \$ 2 * \% / 6; p! ) \ 2 K \# \% 0 + ! \ 32 / ! < \% L \# R . \$! \ . \& L! \ 
                    ] %&.#66.&K%!45#$262-5+! '2&3%/%&K%;!M&#R%/6#0+!23!Q20/%!,.1%;!PK02J%/!dFA;!?>?@!
o=&! P/#8#&! )02/+!32/!45#$262-5+! *#05290! [#0%/./+!Y2/1;p! [#0%/.09/%!.&L!45#$262-5+T!] %6%./K5!
                   < %052L6;! Y#89/%6! .&L! Y2/1 6! 23! N529850(! = &! 0&0%/& .0#2& .$! '2&3%/%&K%;! )% -0% 1 J%/! dFE;!</p>
                   ?>?@(!
o0&K./&.0#2&;!0&L#R#L9.$#0+;!.&L!'2119&#0+!2&!.!)-#/#09.$!b29/&%+;!-/(#4/!"#*%".%"%EM/4/6'"(%
                   -4"&6/&*;! j #/09.$!0&0%/&.0#2&.$! '2&3%/%&K%;!=-/#$!?\F<.+!@;!?>?@!
00&!4/.#6%!23! < 2L%/.0#2&T! < %L#%R.$!45#$262-5%/6!2&!05%! [#&89#60#K!N9/&;p!0&R#0%L! [%K09/%!#&!Y.$$!
                   [%K09/%!)%/#%6;!N5%!'.052$#K!M&#R%/6#0+!23!=1%/#K.:!,%K%1J%/!A:!?>@\!
oN5\%! \ 4/2J\% \ 1! \ 23! \ O.09\%! \ \#\&! \ N521.6! = V9\#\&.6; p! = 1\%/\#K.\&! \ '.052\% \ K.\$! \ 45\#\$262 - 5\#K.\$! = 662K\#.0\#2\&!
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