## ! "#\$%&'()"\*+)\$, #\$-."/''\$ 011/2\*&')\$3"/4)11/"\$

5/66)7)\$/4\$89:2&'\*/+\$&+9\$; : <&+\$!)=)6/. <)+'\$

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A)&: </+'B\\$C)D\\$1\\$EEEFG\\$

**HGIJKKGJEHEL**\$

8 < &\*6\!\\$\N1."/"\O6& < &"\#)9:\\$

8!?50CPQR\$ %&+1&1\$-'&')\$?+\*=)''1\*'@\$ LGGE\$ \$ 3 (#\$!#! #\$%%&'\$(\$)!\*!+,-.%\$'.&/,! !!!!!!!!! 011&&/,2(!3)452-&-6!!378!3,1/%-9)9,.!!: &--9%.2.&/,6!!! "#\$%&'"()"\*+,-+."/&01\$-\$'"+1&"\$20"" *3-45(4-\$-(14"()"#\$%&01\$"60+,2074!* T''\*)+91\$?+\*=)"1\*'@!!! S#\$89#!!!!!! ! !LGGG! ! 31\$'2.\(\&\/\),2(!89219\(\)-5\(\&\/4\)! A#-;!!!!!! U''& < V6\*+7\$-'&')\$?+\*=)''1\*'@\$\$ \$ FIKW! <\$-&'!31\$'2.&/,! ! \$

58, CPTP50CPQR-\$

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! "#\$%&'(%)\*+), -&.##/)0\$+1+)

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?&,19%>2%.9,!G92'59%!!
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                               -5; Q>0, >Y$8R!80XQ, -$
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3))"J,)=*)[)9\/:"+&6\0"'*26)M!
1^<-9, \&X!#:X!74\%/..X! ?:X! 1\%/ 9X!U:X!`Y/\\X!M:X!*!`) /@`Y5$2-$D\X!O:!FCKCJ!!: 9N9(/4\&,>!
I(/[2(!0_2\%9,9--6!E,\&N9\%-\&.D]!7'5//(!2,1!#/)) $,&.D!#/((2[/%2.&/,;!I(\%71+."()"*040+7,2")
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^ ] !74\%/...! ?;X! < -9, >&;!#;X! < &((9\%X!7;!FCKCJH;!U9-92\%'5!0--/'&2.&/,!/T! < &,/%&.D!B%/T9--/%-!6!
B\%.$\%7+...'\B(950\$01\$\"*04(\%7,04\")(7\"@\&\%,+\$(74\F!\M\\$-.\/,\X!\Y9\G!\C\\C\G\X!\CKCJ\;!
^! ] `a#/,,/%X!b;X!74%/...!?;!<-9,>&;!#;X!<&((9\%X!7;!FCKCJH;!U9-92\%'5!0--/'\&2.\&/,!/T!
<&, /%&.D!B%/T9--/%-6!J%-.&-1K"+"#%4$+-1+E.0"L7+90?(7M")(7"B%.$%7+.. '"B(950$01$"
D7+, $-, 04F!M/$-./, X!V9[!C@QX!CKCJ;!]
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### CKCK!

# 3))"J,)=\*)[)9\$\/:"+&6\$0""\*26)\$

^ ] 74%/..X!?;!\*!<-9,>&X!#;!FCKCKH;!E,42'Y&,>!'\$(.\$%2((D!%9-4/,-&N9!&,-.%\$'.&/,! .5%/\$>5!.59!(9,-!/T!2!19(45&!-.\$1D;!Z+\$-(I+."#(,-+."#,-01,0"I(%7I+.;![[F"HX!QK@QS;!P-(%)\*\$(+,!

### 3))"J, )=\*) [)9A//N&+95(&.')"\$

^74\|\dagger\].\|\lambda!\right\righ

### CK"S!

### (3)"J, (

# 3))"J, )=\*) [)9\$5/+4)")+2)\$3"/2))9\*+71! ^] c < ' < /, 2>(9\text{N}!7;!74\text{N}.\text{N}!?;!\*!M2,-9,\text{N}!0;!FCK"RH;!G59!:9(45\text{N}!)9.5/1!\text{L},! 91\$'2.\text{N}/,!\text{N}9-92\text{N}'56!0!.//(!T/\text{N}!4\$[(\text{N}'!-'5/(2\text{N}-5\text{A}!\text{L},!1\text{N}9\text{N}-9!19))/'\text{N}2'\text{A}9-;! FCK"RH;!B\$[(\text{L}-591!\text{!}/,T9\text{9}, '9!B\text{N}/'991\text{L},-;!0)9\text{N}\text{2},!31\$'2.\text{L}/,!U9-92\text{N}'5! 0--/'\text{L}2.\text{L}/,\text{N}! \text{M}'(1!31\$'2.\text{L}/,!U9-92\text{N}'5!0--/'\text{L}2.\text{L}/,!0,,\$2(!<99.\text{L},>;! h 2-5\text{L},>./,!:;\text{!}\text{N}! 04\text{A}\text{(!00"C\text{N}!CK"R;!"-(\text{N})\*\text{L}/;\text{N}\text{S}}\text{3},! ^j 74\text{M}/.\text{N}!?;!FCK"RH;!V/-.9\text{L},>!\text{H}\$(.\$\text{N}2((D!\text{I}/) 49.9,.!\text{I}/))/,!\text{I}/\text{N}9!B\text{B}2'.\text{L}'9-! .5\text{N}/\$>5!2!U94/-\text{L}/\text{ND!}/T!U9-/\\$\text{N}'9-\text{S}|\$\$[(\text{L}-591!\text{!}/,T9\text{N}9, '9!B\text{N}'991\text{L},>-;!"J\text{I}'! 0,,\$2(!31\$'2.\text{L}/,!G/12D6!G\text{N}9,1-!2,1!U9-92\text{N}'5\text{N}!=92\text{S})/,.\text{N}G9g2-\text{N}! < 2\text{N}'5!""\text{N}! CK"R;!F.\*/(\text{+},! \$ \$3))"J, )=\*)[)9\text{S}/+4)")+2)\text{3}")1)+'\text{N}'\*/+1\text{N} ^] \text{0}74\text{N}/.:!?;\text{N}!=\$'Y(9\_\text{N}!\text{S};\text{N}!=2\text{L}-9\text{N}!0;\text{N}!FCK"R\text{H}!: 15+,M-1K"\text{H}(,-+.\text{"}\text{\$\text{N}\text{\chi}\text{C}\text{"}}

8-\$07+\$\%700"!"B\%.\$\%7+...'"\*045(14-;0"60+,2-1K"!557(+,2;!P2.\&/,2(!0--/'\&2.\&/,!

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 $\label{eq:continuous_problem} \text{jjj74\%/..} \text{!?;!FCK"CH;!} B\%.\$\%7 + ."B(14 - \&07 + \$ - (14")(7"DJ/\#\$! < \&--/\$\%! : 942\%.) 9,.!/T!$ 

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                "QX!L@R!b$(D!CK"KX!#%9-./,X!+/_2;!"-(%)*$(+,!
    ii74%/...!?:!FCK"KH;!#$(.$%2(!B%/T&'&9, 'D6!O!G//(!T/%!7$''9--;!8&, '/(,!B$[(&'!
               7'5//(-X!CS@CO! < 2D!CK"KX!8\&,'/(,X!P9[%2-Y2;!"0%(%&,!)]
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               U9-4/, -9!./!+, .9\%N9, .\&/, !+, -.\%\$'.\&/, 2(! < /19(;! < \&--/\$\%\&a-!C"-.!0, ,$2(! < /19(;! < \&--/\$\%\&a-!C"-..0, ,$2(! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;! < /19(;
               B2.5_2D-!#/,T9\%9,'9\X!\$@A!<2\%'5!CK\"K\X!\-2>9!=92'5\X!<\&--/\$\\&;!\"\\O\\(\\&,\I!\)
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   1R&'*/+&6^$
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   ^ ] 74%/..X! ? ;U;!FCKKAH;! 0!-.$1D!/T!%2'&2(!+19,.&.D!2,1!.59!: &-4/-&.&/,!/T!7.$19,.!
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                0) 9\%\&'2,!31\$'2.\&/,2(!U9-92\%'5!0--/'\&2.\&/,!#/,T9\%9,'9X!72,!:\&9>/F''
                #2(&T/%, &2;!04%&(!"J@"SX!CKKA;!"-(%)*$(+,!
                                                                              !P--8, COCPQR$5QS SPCC88-$
            /"407;0&"(1"$20")(..(?-1K"&-4407$+$-(1",(99-$$004"-1"@&%,+$-(1+."80+&0742-5$"
 +) 4\(\text{N9}\)) 9, .;!82) 2\(\text{!E}\,\&\text{N9\(\text{N}-\&\text{L}\)!=92\(\text{S}\))/, \(\text{X}\)!G9g2-;!
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7.\$19,.!+)4\%/N9)9,..!82)2\%!E,\&N9\%-\&D!=92\$)/,.X!G9g2-:!
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! "#\$%&'(%)\*+), -&.##/)O\$+1+)

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< 2.59) 2.&'-6!0!:9-'%&4.&N9!7.$1D!82) 2%!E,&N9%-&.D!=92$)/,.X!G9g2-;!
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                                                     7/'&2(!7.$1&9-!#9%.&T&'2.&/,!G9-.!!
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CK"J@CK"Q!!!!!!!!!!
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CK"K@CK"C!
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                                                          31\&./\&2(!U9N\&9_!=/2\&1X!G92'59\&!
                                                          31\$'2.\&/,!2,1!B\%2'.\&'9X!G59!U/_)2,!
                                                          2,1!8\&..(9!B\$[(\&-5\&,>!I\%/\$4!
CK"K@CK"C!
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                                                          G5/\$-2,1! 2Y-X!#2(\&T/\%,\&2! !
CKKA@CK""!!!!!!!!!!!
                                                          B\%/4/-2(!U9N\&9_9\%X!0)9\%\&'2,!!
                                                          0 - - / \ \& 2.\& / , !/T! 31 \ '2.\& / , !U9 - 92\% \ '5X!!!
                                                          h 2-5 \& > ./ \& : #;!!
                                                          P2.\&/,2(!<2>,9.!7'5//(!/T!0)) 9%&'2!!
CKKO@CK"K!
                                                          B(2, , \&, >!#/) ) \&..99X! ) 252X!!
!
                                                          P9[%2-Y2!!
CKKS@CK"K!
                                                          U9N&9_91!#52%.9%!7'5//(!B%/4/-2(-X!!
                                                          ?2,-2-!:942\%.)9,.!/T!31$'2.\&/,!!
                        1
                                                          G/49Y2X!?2,-2-!
```

 $3, QT8 - PQR0 > Q, U0RP \ 0CPQR - 1$