```
!"##$\\&''())*+,\\
                                    "#$$%"#&# '!(%)*+!
                                       , -./011. -!+ 20-345!
                                  6077892: ; :1<0514=5890><!!
" 343?071@36A! " 575>5!57>!#B *!
"-('*./0#\\
CDEFGEH
                      , @9 I 9!! #73J0-1348! . /! K31: . 7137!L7 . M!N37013 . 0 . P80!
                      LI3110-4543.7A!R'.>00!1454<1!57>!5440743.7A!*!65-4350!4014!./!1.:350!005-737P!
                      4@0.-8R0!
CDESGEF!
                       ' 9B9!#73J0-1348!./!K51@37P4.7T!B054400!!L=0:520!N37013.0.P80!
                      L)@0131A!RB.:350!/5:3034543.7!57>!2.4.-!60-/.-257:0A!I-3J0!1<22543.7!.-!
                      37J0-40>G#URQ!!
!!!
CDEVGES!
                      W9B9!B4540!#73J0-1348!./!X0M!Y.-Z!G!".000P0!54!W-.:Z6.-4!
                      [-5><540>!B<2 25!"<2!&5<>0!\!I.<=00! '5].-!LB6.-4!
                      B:307:0^{\$}0:-0543.70!
!!!
CDHDGEV!
                      ) 05:@37P!"0-43/3:540!G!B49!"54@0-370_1!) 05:@0-1_!".000P0G!W-.:Z!
                      #73J0-1348G!!+00 2 0745-8!) 05:@37P!"0-43/3:540!
CDHEGHD
                      I 360. 25! "074077350! ".000P0T!G! I 360. 25!37!$0:-0543.7!GB:5-=.-.<P@T! `749!
*!!0/#.&"#.1\\2\\*'*-"&/'\\
SVCE!!
                      ,-./011.-!+20-345T! I 065-42074!./!N37013.0.P8T! "B#!+514!W58!
SVCa6SVCE!
                      .-./011.-T! I 065-42 074!./!N37013.0.P8T! "B#!+514!W58!
SVVD6SVCa!
                      .-./011.-!57>! "@53-T! I 065-42 074!./!N37013.0.P8T! "B#!+514!W58!
                      , -./011.-T! I 065-42074!./!N37013.0.P8T! "B#!+514!W58!!
SVVEGSVVD!
                     %740-32!*11.:3540! I 057T!".000P0!./!+><:543.7!57>!*0030>!B4<>301T!"B#+W!
SVVHGSVVE!
SVVbGSVVH!
                      .-./011.-T! I 065-42 074!./!N37013.0.P8T! "B#!+514!W58
```

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*4407>0>!:0511!M34@! I -9! * 0=0-4!W57><-5!\!B457/.->!#73J0-1348!
CDcbGCDDS!
                      * 11314574!, -./011.-!G! I 065-42 074!./!N37013.0.P8T!#73J0-1348!./!".0.-5>.T!
                      W.<0>0-!
                      *11.:3540! '02=0-!G!%71434<40!./!".P7343J0!B:307:0!G!#73J0-1348!./!
CDcbGCDDD!
                      ".0.-5>.T!W.<0>0-!
CDcSGcb!
                      $0105-:@!*11.:3540!G!#73J0-1348!./!".0.-5>.T!W.<0>0-!M@300!M.-Z37P!
                      . <413>0!4@0!#73J0-1348!
CDcCGcS!
                      &0:4<-0-!G!#73J0-1348!./!".0.-5>.T!W.<0>0-!!
                      ,-.]0:4!*11314574!G!I0:313.7!I0J00.62074!".-69!G!B5:-52074.T!"*!
CDcV!!
CDEEGcC!
                      $0105-:@!*11.:3540!G!#73J0-1348!./!"503/.-735T! I 5J31!
CDEEGED!
                      &0:4<-0-!G! I 065-42074!./!, @813:50!+><:5ET8, <-0-!
```

@00637P!-0J30M!57>! 2 .>3/8!4@0!" .000P0e1! [ <3>003701!/ .-!6- ./0113 .750! 5:@30J0 2 0741T!57>! f <5-40-08!6- ./0113 .750!>0J00 .6 2 074! 2 00437P1!M34@!4@0! I 057!57>!\$ ) ,!:57>3>5401!M34@37!4@0!: .000P09!) @31!M .-Z!31!501 .!-0: .P73?0>!

37!4@0!".000P0!./!+><:543.7e1!5::-0>34543.7!6-.:0119!

CDcCT!CDDCT!CDDb! B340! I 3-0:4.-!\*77<50!X\*B,B,\*!".7/0-07:0!

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&8'9::; <=>%!?!!*:43J0!d000.M!LmaFCQ!37!X543.750!*:5>028!./!N37013.0.P89!L%7><:43.7!
:0-02.78!B06402=0-T!SVVSQ!LdX*NQ!
!
&8'9::; <=>%!?%LSVVbQ9!%7J340>!51!".2207:02074!B605Z0-T!"074077350!".000P09!I0:0370>!><0!4.!
```

- FS9 \$529!X9T! j ! **&8 ' 9::**; <=>\! ?!LSVVF(\text{0}!B00/G2.>0037PA! I .01!M54:@37P!8.<-100/!60-/.-257:0! 37/0<07:0!6@813:50!57>!618:@.0.P3:50!60-/.-257:0U!) @0!B6.-4!, 18:@.0.P314T!CET!SSVGSFS\!!
- FF9 B..1..T!B9T!) 5Z0 2..4.T!N9Y9! ': "<005P@T!,9!LSVVaQ!\*!:.265-31.7!./!2.>0037P!57>!3 2 5P0-8! .7!4@0!60-/.-257:0!./!5! 2..4.-!1Z3009!i.<-750!./!B6.-4!W0@5J3.-T!SET!FaDGFHH9!

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- Fb9 "<2 2 37PT!i9T!B40G ' 5-30T! I 9 ' 9T! "05-Z0T!B9+9T!! j ! ' : "<005P@T!, 9T! j ! 1 500T! "9\\\LSVVbQ9!)@0! /<7:43.71!./!.=10-J543.750!005-737P!f<0143.7753-0!Ld `&kQ9!, 18:@.0.P8!./!B6.-4!57>!+g0-:310T! HT!bCEGbFE9!
- FE9 **&8'9::;**<=>**!**?>**!**A%K301.7T![9%LSVVEQ%,18:@.0.P8!./!6@813:50!5:43J348A!K@54!.<-!14<>0741!1@.<0>!Z7.M9!<u>k<014T!bDT!</u>aSGba9!
- \*\*\*Fc9 \*\*7>0-107T! ' 9W9T! **&8 ' 9::;** <=>\*! ?\*\*\***A** \*\*K 301.7T! [ 9!LSVVEQ9!!W<4!M@54!>.!4@0!7<2 =0-1!-05008!4000! <1U! \*\*-=34-5-8! ' 04-3:1!37!B6.-4!, 18:@.0.P8!\$0105-:@9!i.<-750!./!B6.-4! j !+g0-:310! ,18:@.0.P8T!SDT!!HHaGHES9!
- FD9 **&8'9::;** <=>%!?!LSVVcQ9!, -5:43:0!:.713>0-543.71!37!P.0/A!)@0!-.00!./!.=10-J543.750!005-737P9!%7! d<4<-0!./![.0/0-1T!I09!"-0M1!L+>9QT!+70-P8!37!'.43.7T!'015T!\*?9!,69!!SFFGSbC!
- aC9 **&8'9::;**<=>**\!**9T!&5MT!W9! j !B40G' 5-30T! I !!LSVCSQ9!!' .>0037P!57>!60-/.-257:09!\\7!!B9!' <-6@8! L+>9Q9!)@0!\g/.->! 157>=..Z!./!B6.-4!57>!,0-/.-257:0!,18:@.0.P89!X0M!Y.-ZT!\g/.->!,-011T!669!SbVGSES9!!

- aS9 B40G ' 5-30T! I 9T!&5MT!W9T! \$ 8 2 50T! \* 9 ' 9T! ` T!i9T! I 500T! " 9T! **&8 ' 9::;** <=>>**!** ?!LSVCSQ9! ` =10-J543 . 750! 3740-J0743 . 71!/. -! 2 . 4 . -!1Z300!005-737P!57>!60-/. 2 57 : 0A! \* 7!566030>! 2 . >00!/. -!4@0!<10! . /! . =10-J543 . 79!\%740-7543 . 750!! \$ 0 J30M! . /!B6 . -4!57>!+g0-:310! , 18:@ . 0 . P8T!CGFS9!!
- aF9 **&8'9::;**<=>\! 97!B40G' 5-30T! I 97! j !&5MT!W9!!LSVCa

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! "0740-!/.-!\$0@5=3034543.7T!+g0-:310! j !B6.-4!B:307:09!\#73J0-1348!./! (3:4.-35T! '00=.<-70T! *<14-5035T!*<P<14T!CDDb9!! ! ":"<005P@T!,9!`=10-J543.750!005-737PA!*6603:543.7!37T! K 0007011T!$0@5=3034543.7!57>!B6.-4! B04437P19!N37013.0.P8!".00.f<3<2!B0-301T!d0=-<5-8T!CDDH9!
```

```
!
Sa9
':"<005P@T!,9!LSVVbQ9! K @54!4@08!100T! 258!=0!M@54!8.<!P04A! I 0J00.637P!6.1343J0!-.00!
2.>001!37!8.<4@!16.-49!Y.<4@!B6.-4!B<2 2349!B6-37P/300>T! '5-:@9!
!
Sb9
':"<005P@T!,9!LSVVbQ9! I 0J00.637P!6.1343J0!-.00! 2.>001!37!8.<4@!16.-49!N.-057!*00357:0!
/.-!10504@T!,@813:50!+><:543.7T!$0:-0543.7T! j!I57:09!B0.<0T!N.-05T!*<P<149!
!
SH9
```

```
65700!6-01074543.7!54!HS7>!*77<50!".7/0-07:0!./!4@0!K0140-7!B.:3048!/.-!N37013.0.P8!
        57>! K 0007011T!$07.T!X (9!
FD9
       N087.40!G! ': "<005P@T!, 9!LSVCcQ9!N37013.0.P8!37!X.-4@!*20-3:5A!Y0140->58T!).>58!57>!
        ). 2.--.M!G!\(\)740-7543.750! ".7/0-07:0!.7!N37013.0.P8G!B0.<0T!N.-059!
aV9
       ': "<005P@!LSVCc09!N37013.0.P8!57>!X.-4@!*20-3:57!57>!4@0!*20-3:57!N37013.0.P8!
        *11.:3543.79!)@0!*:5>023:!".000P0!54!K37P540T!*6-30T!\1-5009!!
aC9
        ': "<005P@T!, 9!LSVCc09!`=10-J543.7!37!B6.-4A! I. 01!M54:@37P!:@57P0!.<-!6@813:50!57>!
        618:@.0.P3:50!=0@5J3.-1U!\\7J340>!\\087.40!\\\740-7543.750!\\.00.f<3<2!\\086.-41!
        , 18:@.0.P8T!X<0J.!&0.7T! '0g3:.!L`:409!!
        N087.40!G! ': "<005P@T!,9!LSVSVQ9!$0105-:@!4.!,-5:43:0!\!I.01!34!`::<-!37!B6.-4!
aS9
        ,18:@.0.P8U!
        +<-.6057!X04M.-Z!./!Y.<7P!B60:3503141!37!B6.-4!,18:@.0.P8!L+XYBB,09! [@0741!
        W00P3<2T!*6-30!CH!4.!Cc9!"57:000>!><0!4.!".J3>!CD!
aF9
        N087.40!G! ': "<005P@T!, 9T! j !+08T!d9! `9!LSVSCT! *6-3009!$0105-:@!4.!6-5:43:0!G!>.01!34!..:<-!
        37!16.-4!618:@.0.P8U!N087.40!6-01074543.7!54!+<-.6057!X04M.-Z!./!Y.<7P!B60:3503141!37!
        B6.-4!, 18:@.0.P8!L+XYBB, 01!*77<50!:.7/0-07:01!6-010740>!J3-4<50089!
        !
!
```

```
!D9!!
        ': "<005P@T!, 9!+//0:43J0!: .5:@37P!005>0-1@369!" .0.-5>.!K . 2 07 1!*0!B4540!" .7/0-07:09!
       W.<0>0-T!" \ 9!i<70!CDcE9!
        ': "<005P@T!, 9!B6.-4!618:@.0.P8A!, -5:43:50!:.713>0-543.71!/.-!:.5:@019!W.<0>0-! (50008!
CV9!!
        [3-01!B./4=5009!W.<0>0-T!" \ 9! \ 58!CDcE9!
CC9!!
        ': "<005P@T!, 9!&05>0-1@36!37!8.<4@!16.-4!6-.P-5 2 19! ".0.-5>.!*11.:3543.7!/.-!1 0504@T!
        , @813:50!+><:543.7!!$0:-0543.7! j!I57:09!I07J0-T!" \ 9!B0649!CDcE9!
CS9!!
       ':"<005P@T!,9!".5:@37P!:.7:0-71!37!8.<4@!16.-4!6-.P-5.2.19!".0.-5>.!I.0649!./!+><:543.7!
       G!+><:54.-1!/.-!*4@0043:!+f<348!57>!&05>0-1@369!W-0:Z07-3>P0T!"`9!*6-30!CDcc9!
CF9!!
       ':"<005P@T!,9!B6.-4!618:@.0.P8T!57>!16.-4!60>5P.P8T!".0.-5>.!*11.:3543.7!/.-!10504@T!
        , @813:50!+><:543.7!!$0:-0543.7! j!I57:09! (530T!"`9!`:49!CDcc9!
Ca9!!
       ':"<005P@T!,9!I0J00.637P!5!:.5:@37P!6@30.1.6@89!".0.-5>.!I065-42074!./!+><:543.7!G!
       +><: 54.-1!/.-! * 4@0043:!+f<348!57>!&05>0-1@369! I 07J0-T! " ` T!i57<5-8!CDcD9!
Cb9!
       ': "<005P@T!, 9!*7!. J0-J30M!57>!57508131!./!:.5:@37P!0><:543.7!6-.P-5219!Y.<4@!B6.-4!
       ".50343.7!,-.P-52T!*20-3:57!*00357:0!/.-!10504@T!,@813:50!+><:543.7T!$0:-0543.7!j!
       I 57:09!W.14.7T! '*9!*6-30T!CDcD9!*!:.265-31.7!./!4@0!*"+,!57>!XYB"*!Y.<4@!B6.-4!
       ".5:@37P!,-.P-5 2 19!!
CH9!!
       ':"<005P@T!,9!".5:@01!4-53737P!37!4@0!16.-4!1:307:019!)@0!,18:@.0.P8!57>!,@30.1.6@8!./!
       ".5:@37P9!*1607!B:@..0!I314-3:4T!*1607T!"`9!'58T!CDcD9!
CE9!!
       ':"<005P@T!,9!IOJO0.637P!5!:.5:@37P!6@30.1.6@8!57>!16.-4!618:@.0.P8!/.-!:.5:@019!
       d347011!$01.<-:01!K.-Z1@.6T!I07J0-T!"`9!*<P<14T!CDDV9!
Cc9!!
       ':"<005P@T!,9!Y.<4@!16.-41A!W08.7>!4@0!F!$19!W.<0>0-!(50008!B:@..0!I314-3:4!G!
       +3107@.M0-!B:@..0!G!!W.<0>0-T!" ` 9! ' 5-:@!CDDV9!
CD9!!
```

```
Sa9
         ': "<005P@T!, 9!LSVSSQ9! 1 . M!4.!" . 7/0-07:09!X*B, B, *!B4<>074!B6-37P!+J0749! `7!&370!
         ' 58!F9! K 34@!i0778! ` 9! 1 . 140>!=8!&5<-07! 1 3PP3719!
*=14-5:41<sup>^</sup>,-01074543.71!
C9!
        &8'9::;<=>| 17! j | 257>0-17! I 9'9|LCDEF(9|B.:350|/5:3034543.7|57>| 2.4.-|60-/.-257:0A|
        I - 3J0!1 < 2\ 2\ 543\ .\ 7!\ .\ -!37J0 - 40 > 6\#U!! \underline{d3 - 14!\ "\ 575 > 357!\ "\ .\ 7P - 011!/\ .\ -!4@0!\ '\ < 043G\ I\ 31:360375 - 8!
        B4<>8!./!B6.-4!57>!, @813:50!*:43J348T!!69!SE9!L*=14-5:409!
S9!
        &8'9::;<=>\!!!LCDEcQ9!'.>00!1454<1!51!5!>040-237574!./!5440743.7!37!.=10-J543.750!
        005-737P9! "575>357!, 18:@.! '.4.-!&05-737P!57>!!B6.-4!, 18:@.0.P8!B826.13<2T!!
        L * = 14-5:409!
F9!
        &8'9::;<=>\!!!LCDcHQ9!'.>00!B3 2 305-348!51!5!>040-2 37574!./!5440743.7!37!.=10-J543.750!
        005-737P9!, 18:@.0.P8!./! '.4.-!W0@5J3.-!57>!B6.-4T!69!CFD9!L*=14-5:409!
a9!
        &34400T! K 9B9T! j ! &8 ' 9::; <=>\!!!LCDcE09! *!: . 2 65-31 . 7! . /! 2 . >0037P!57>!Z7 . M00>P0! . /!
        -01<0419!, 18:@.0.P8!./! '.4.-!W0@5J3.-!57>!B6.-4T!69!aS9!L*=14-5:409!!
        &8'9::;<=>1!?T! j !W070>0443T! "9&9!LCDcE09!!, .14GZ7.M00>P0!./!-01<041!>00589!, 18:@.0.P8!
b9!
        ./! ' .4.-!W0@5J3.-!57>!B6.-4T!69!ab9!L*=14-5:409!
        &8'9::;<=>| 17! j | 234400T| K9B9!LCDcE(9!) @0!6.407:8!./!37/.-2543.7!6-.J3>0>!=8!J5-3.<1!
H9!
        2.>5034301!37!2.>0037P9!, 18:@.0.P8!./! '.4.-!W0@5J3.-!57>!B6.-4T!69!aH9!L*=14-5:409!
E9!
        &8 '9::; <=>\!!!LCDcE09!\\1!5!63:4<-0!M.-4@!5!4@.<157>!M.->1U!! ".P7343J0T!>0J00.6207450!
        j!2.43J543.750!:.713>0-543.71!37!2.>0037P9!,18:@.0.P8!./!! '.4.-!W0@5J3.-!57>!B6.-4T!69!
        aGH9!L*=14-5:409!
c9!
        &8'9::;<=>\!?T!j!"53->T!i9N9!LCDcc(9!*!:.265-31.7!./!0g02605-8!57>!005-737P!10f<07:0!
        2.>001!57>!4@0!<10!./!2.>00!!Z7.M00>P0!./!-01<041!4.!37:-0510!005-737P!57>!60-/.-257:09!
        , 18:@.0.P8!./! '.4.-!W0@5J3.-T!!69!CCH9!L*=14-5:409!
D9!
        &8'9:::<=>\!?T!X.-4@T!)9"9T!j!'...>T!I9!LCDcc09!!+g0-:310!51!5!4-0542074!/.-!>06-0113.7A!
        *!20456575081319!, 18:@.0.P8!./! '.4.-!W0@5J3.-T!69cS9!L*=14-5:409!
CV9!
        &8'9::;<=>\!?!B430@0T!i9T!j!K0311T!'9$9!LCDcc09!I0J00.6207450!:.713>0-543.71!37!
```

```
CS9!
        &8'9::;<=>%!?T!j!W05:ZM000T!W9!LCDccQ9!$00543.71@36!./!03/0!14-011!/5:4.-1!57>!
        :. 2 604343J0!57g3048!4. !37]<-3019! * 11 . : 3543 . 7!/ . -!4@0! * > J57 : 0 2 074! . /! * 66030>!B6 . -4!
        , 18:@.0.P8T!69!aS9!L*=14-5:409!
       X.-4@T!)9"9T! &8'9::;<=>%!?T!)-57T!p9(9T!j!K50Z0-T!B9+9!LCDccQ9!)@0!0//0:41!./!0g0-:310!
CF9!
        B<6600 2 074T!SVT!B9Db9!L*=14-5:409!
        &8'9::;<=>| 17!B430@0T!i9T! j!"53->T!i9!LCDcc(9!) @0!>85>3:!-00543.71@36!./!65-07450!57>!
Ca9!
        8.<4@!0g60:4543.71A! * 7!0g60.-54.-8!57508131!./!2.43J01!57>!54434<>019!* 20-3:57!*00357:0!
       /.-!10504@T!, @813:50!+><:543.7!57>!$0:-0543.7!!69CSE9!L*=14-5:409!
Cb9!
        &8 '9::; <=>\! ?T! '0-3M054@0-T! *9T!B30P00T! I 9T!W34?0-T!+9T! [30057T!&9T! i!&34400T! K 9B9!LCDcD09!
        ) 01437P!57!.=10-J543.750!005-737P!4..0A!) @0!0//0:43J07011!./!B8=0-J313.7!.7!4@0!005-737P!
        ./!5!407731!10-J0!=8!7.J3:0!60580-19! * 20-3:57! * 00357:0!/.-!10504@T!, @813:50!+><:543.7T!
       57>!$0:-0543.7T!L*=14-5:409!
CH9!
        &8'9::;<=>||!?T! | | | | | &04@3T|B9!LCDcD09! | | @0!:.74-3=<43.7!./!2.>0037P!57>!Z7.M00>P0!./!
       -01<041!37!005-737P!451Z!14-540P3019!, 18:@.0.P8!./! '.4.-!W0@5J3.-T!69Eb9!L*=14-5:409!
CE9!
        "53->T!i9N9T! j !&8 '9::;<=>\!!!LCDcDQ9!, 0-:0643.765:43.7!57>!:.P7343J0!-06-01074543.71!37!
       4@0!.=10-J543.750!005-737P!./!5!:8:03:!2.4.-!65440-719!,18:@.0.P8!./! '.4.-!W0@5J3.-T!69!
       HD9!L*=14-5:409!
Cc9!
        &8'9::;<=>|| 1.71' | 54?Z5737T!N9T! || 1.1' | <0>575>. T!X9!LCDcD09! || @0!-00543. 71@36!=04M007!8. <4@!
       57>!65-07450! 2 .43J01!/.-!16 .-4!65-43:36543 .7T!60-:03J0>!: . 2 60407:301T!57>!: . 2 604343J0!
       57g30489!*11.:3543.7!/.-!4@0!*>J57:02074!./!*66030>!B6.-4!,18:@.0.P8<u>T</u>!69!Eb9!
       L * = 14-5:409!
CD9!
       X.-4@T!)9"9T!&8'9::;<=>\\!?T!j!)-57T!p9(9!LCDcD09!+//0:4!./!0g0-:310!T!!69!ca9!
       L*=14-5:40957>!618:@.4@0-560<43:!4-05420741!.7!>06-0113.7A!*!20450575081319!*11.:3543.7!
       /.-!4@0!*>J57:02074!./!*66030>!B6.-4!,18:@.0.P8!
SV9!
       X.-4@T!)9"9T!)-57T!p9(9T!j!&8'9::;<=>\!?!LCDcD09!+//0:4!./!5!137P00!10113.7!./!0g0-:310!
        .7! > 06 - 0113 .7! 00 J 00 A! *! 2.0456575081319! *11 .:3543 .7! / ..! 4@0! * > J57: 0.2.074! ./! *66030 >! B6 ... 4!
        , 18:@.0.P8T!69!cb9!L*=14-5:409!!
SC9!
       d.140-T! (9&9T!&0W5-.7T! [9&9T!&8'9::;<=>\\!?T! j!I3:Z371.7T!*9!LCDcD09!,@813.0.P3:50!57>!
        618: @ . 0 . P3: 50!: . 2 65-31 . 7! . /!4M . !00340!M . 2 07 1!1 . : : 0-!405 2 19!i . <-750! . /! * 66030>!B6 . -4!
       B:307:0!$0105-:@T!(.09!FT!69!Eb9!L*=14-5:409!
SS9!
        &8'9::;<=>\!?T!W<-:@T!"9I9T!j!B30P00T!I9!LCDDV09!".--0:4!57>!100/62.>0037P!57>!4@0!-.00!
        ./!/00>=5:Z!37!2 .4.-!1Z300!5:f<31343.79!, 18:@.0.P8!./! ' .4.-!W0@5J3.-T!69!EC9!L*=14-5:409!
SF9!
        54?Z5737T!N9T! j ! &8 '9::;<=>!!!!LCDDVQ9! * 7!37J0143P543.7!./!60-1.750!37J0142074!4@0.-8!
       57>!5>@0-07:0!4.!57!50-.=3:!0g0-:310!6-.P-529!*11.:3543.7!/.-!4@0!*>J57:02074!./!
```

Sa9! 1571.7T!B9i9T!**&8'9::;**<=>\!?T!j!).782.7T!,9!LCDDVQ9!,18:@.1.:350!6-0>3:4.-1!./!54@0043:! 37]<-8!37!4-5:Z!57>!/300>!54@00401A!\*!65-4350!4014!./!4@0!\*7>0-107!57>!K3003521!2.>009!

\*11.:3543.7!/.-!4@0!\*>J57:02074!./!\*66030>!B6.-4!,18:@.0.P8T

HC9 \$52T!X9T%

- Ea9 Y57T!i919T!j!**&8'9::;**<=>%!?!LSVVSQ9!"@30>-07e1!2.43J543.7!37!6@813:50!5:43J348A!"<04<-50! 37/0<07:019!\*2.0-3:57!\*00357:0!/.-!10504@T!,@813:50!+><:543.7T!\$0:-0543.7T!57>!I57:0T! \*6-309!B57!I30P.!L69!DVQ9!
- Eb9 B..1..T!B9T!) 5Z0 2 .4.T!N9T! j ! **&8 ' 9::**; <=> ! 9!LSVVSQ9! '.>0037P!57>!3 2 5P0-8!51! 3740-J0743.71!/.-!1Z3001!5: f <31343.79! \* 2 0-3:57! \* 00357:0!/.-! 1 0504@T!, @813:50!+><:543.7T! \$0:-0543.7T!57>! I 57:0T! \* 6-309!B57! I 30P.!L69!DVQ9!

- cb9 ':"<005P@T!,9!LSVCVQ9!#137P!2.>0037P!4.!07@57:0!6@813:50!57>!618:@.0.P3:50!1Z30019!)@0! B6.-4!,18:@.0.P8!57>!B6.-4!B:307:01!".7/0-07:09!&3P757.T!B5==35>.-.T!%45089!
- CH9 \$0P57T! '9\$9T! j!':"<005P@T!,9!LSVCVQ9!\*7508131!./!@.2.0.P.<1!-06-.><:43.7!37!
  :.22<7348!:.000P0!54@0043:1A!)@0!/.-P.4407!371434<43.79!,560-!6-010740>!54!4@0!577<50!
  :.7/0-07:0!/.-!4@0!X.-4@!\*20-3:57!B.:3048!/.-!B6.-4! '575P02074T!LX\*BB'QT!)52659!
- cE9 ':"<005P@T!, 9!LSVCC(9!\$016.7>074!4.!B826.13<29!\%!5!63:4<-0!31!M.-4@!5!4@.<157>!M.->1T! 4@07!31!:.2=3737P!.=10-J543.7!57>!325P0-8!M.-4@!5!23003.7U!\*!1826.13<2!.7!4@0! 3740-5:43.7!=04M007!.=10-J543.7!57>!325P0-8!6-.:011019!"<2237PT!iT!K30035219!BT!&5MT!

DE9

```
+4*#.1\|*#-\|!403"'.1\|*#-\|4"1"*4',\|1(!!04.\|*5*4-1\|
%740-750! j !+g40-750!!
$857T!+9I9T! i!: "<005P@T!,9!L".!G!,\\09!*44-3=<43.7!57>!60-:0643.7!./!/543P<09!d5:<048!$0105-:@!
[-574!G!#73J0-1348!./!"503/.-735T! I 5J31!CDEE9!LsbVVV09!
 ':"<005P@T!,9!L,%09!!%714-<:43.750![-574!,-.P-52!G!%740P-5437P!:.26<40-1!37!4@0!!:0511-..2!G!
, -37:36001!57>!, -5:43:01!./!d347011!".<-10!6!#73J0-1348!./!".0.-5>.T!W.<0>0-9!CDcH9!LsbVVVQ9!!
': "<005P@T!,9!L,%09!%714-<:43.750! [-574!,-.P-52!6!%740P-5437P!:.26<40-1!37!4@0!:0511-..29!
#73J0-1348!./!".0.-5>.T!W.<0>0-9!CDcE9!LsbVVVQ9!
':"<005P@T!,9L,%09!*!:.265-31.7!./!J3>0.4560!3714-<:43.7!57>!6@813:50!6-5:43:0!.7!/.-2!57>!
5::<-5:8!37!4@0!407731!10-J09!#7340>!B45401!)07731!*11::3543.79!CDcc9!LsbVV09!
&34400T! K 9T! j!': "<005P@T!, 9!L".!G!, %09!*!: . 2 65-31.7!./! 2 .43J543.750!.-3074543.7!57>!
3714-<:43.750!14-540P301!.7!/.-2!57>!5::<-5:8!37!4077319!#7340>!B45401!)07731!*11.:3543.7T!CDcc9!
LsbVV09!
': "<005P@T!, 9!L, %09!) @0!<10!./!J3>0.4560!57>!325P0-8!4.!07@57:0!1Z3000>!60-/.-257:09! "074-50!
I 314-3:4! * * 1 , + $ I ! * M5->T!CDcDGDV9!LsCVVV09!
': "<005P@T!, 9!L, %09!) 01437P!4@0!0//0:43J07011!./!B8=0-J313.7!.7!4@0!005-737P!./!4@0!407731!10-J09!
#7340>!B45401!) 07731! * 11 . : 3543 . 7T! ' 58!CDDV9!LsDbV09!
 ': "<005P@T!, 9!L, %09!, 18:@.0.P3:50!57>!1.:350!/5:4.-1!51!>040-2375741!./!54@0043:!37]<-3019! ".<7:30!
. 7!$0105-:@!57>!"-0543J0!K.-ZT!#73J0-1348!./!".0.-5>.T!i57<5-8T!CDDC9!LsFVVV09!
W8-701T! K9 "9T!L" . !G! , %09! ': "<005P@T! , 9!L" . G , %09! j ! I 3: Z371 . 7T! * 9!L" . G , %09! * !: . 2 65-31 . 7! . /!4@0!
37:3>07:0!57>!10J0-348!./!37|<-8!=04M007!-5:0!M50Z37P7!-<7737P!57>!1406637P9!*<P<14!CDDC9!
$00=.Z!\%740-7543.750!!\&4>9!LsEVTDVC09!
': "<005P@T!,9!L".G,%09!j!X.=00T!i9!L".G,%09!)@0!0//0:43J07011!./!J3>0.!45601!/.-!07@57:37P!
407731!60-/.-257:09! "074-50! I 314-3:4! * * 1 ,+$ I !*M5->\text{!!} * <P<14!CDDC9!LsaVV(9!
':"<005P@T!,9!,18:@.0.P3:50!/5:4.-1!57>!54@0043:!37]<-89!d5:<048!16.71.-0>!#7>0-P-5><540!
$0105-:@!\66.-4<7348!,-.P-529!X.J02=0-T!CDDF9!LsCcVV09!
': "<005P@T!.9!#7>0-P-5><540!$0105-:@!`66.-4<7348!.-.P-529!B60:350!B02375-9!`=10-J543.750!
&05-737P!) 0:@73f<01!37!N37013.0.P89!LsaVVVQ9!
K 0311T! '9$9T! j!': "<005P@!,9!LCDDFQ9!%7/0<07:0!./!".637P!'.>001!.7!&05-737P9!B6.-4!
, 18:@.0.P8!*:5>0289!**1,+$I9!LsCFVV09!
&57>0-1T! I 9 ' 9! j ! ' : " <005P@T! .9!L" .G ,%09!#7340>!B45401! ` 08 2 63:!" . 2 2 344009!$0105-:@! j !
)-53737P!4.!\\7:-0510!\*-:\@0-1_!\,-.\\3:307:\8!37!\\.2\60437P!37!4\@0!\X0M!\\08\2\63:!\\$\.<7>9!\Ls\SETc\bH\09!
i57!CDDbG I 0:!Db9!
```

```
! ': "<005P@T!, 9L, 6%Q9!#7340>!B45401!`08 2 63:!". 2 2 344009!$0105-:@!57>!)-53737P!4.!%7:-0510! *-:@0-1!, 0-/.-257:0!)@-.<P@!B00/!'.>0037P9!LsFVTcSaQ9!i57<5-8!CDDH
```

```
\label{eq:control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_control_co
```

```
". 26300>!G!, 18:@.0.P8!./!B6.-4!57>! '.4.-!W0@5J3.-!G!*=14-5:41!L)0:@73:50!
CDcC!!
              6-.><:43.7!./!5=14-5:41!/.-!*77<50!".7/0-07:00!
CDcH!!
               $0J30M0-T!*>J57:01!37! '.4.-!I0J00.62074!$0105-:@9!
              %X(%) + I!, `B%)%`X!
CDEDGDV!
               [<014!$0J30M0-!G!i.<-750!./!B6.-4!j!+g0-:310!,18:@.0.P8!
              L"-343:50!-0J30M!57>!1000:43.7!./!5-43:001!/.-!6<=03:543.70!
              %X(%) + I!, `B%)%`X!
CDEcGDV!
               [ <014! $0J30M0-!6! $0105-: @!k<5-40-08!/.-!+g0-:310!57>!B6.-49!
              B<6600 2 0749L"-343:50!$0J30M!57>!1000:43.7!./!5-43:001!-00540>!4.!4@0!1.:350!
              618:@.0.P8!./!60-/.-257:009!!
              %X(%) + I!, `B%)%`X!
CDcSGSVVb!
               [<014!$0J30M0-!G!i.<-750!./! '.4.-!W0@5J3.-!
              %X(%) + I!, `B%)%`X!
CDcD!!
               $0J30M0-!G! <u>I 3:43.75-8!./!4@0!B6.-4!B:307:01</u>T! 1 < 257!N37043:!, <=031@0-1!
CDDCGDb!
              +>34.-350!W.5->!G!)@0!B6.-4!,18:@.0.P314!
              %X(%) + I!, `B%)%`X!
CDDFGDH!
              B0:43.7!+>34.-!G!, 18:@.0.P8!G!$0105-:@!k<5-40-08!/.-!+g0-:310! j !B6.-4!
              +>34.-350!W.5->!6!i.<-750!./!B6.-4!57>!+g0-:310!,18:@.0.P89!
CDDVGSVVD!
              %X(%) + I!, `B%)%`X!
```

CDDcG! SVVH! +>34.-350!W.5->!G!

```
SVCH66-01074! +>34.-T!N37013.0.P8!).>58!L.760370!25P5?370!./!4@0!*20-3:57!N37013.0.P8!
*11.:3543.79!$016.713=00!/.-!1.03:3437P!57>!M-3437P!5-43:001!/.-!5!f<5-40-08!.70370!
25P5?3709!
```

```
! 01/./0#1\\/#\\#*./0#*)\\10'/"./"1\\
CDcVGcF!
               ,<=03:543.7! I 3-0:4.-!G!X.-4@!*20-3:5!B.:3048!/.-!4@0!,18:@.0.P8!./!B6.-4!57>!
               , @813:50!*:43J3489!"..->37540>!6<=03:543.7!./!)-30577<50!X0M100440-!./!57!
               5:5>023:!-0105-:@!1.:3048!57>!10-J0>!.7!4@0!0g0:<43J0!>0:313.7!25Z37P!=.>8!./!
               4@31!.-P573?543.79!
               +\&+") + I!WY! ' + ' W+$B1%,!`d!B`"%+)Y9!
CDcc!!
              X. 237540>!4.!10-J0!51!, <=03:543.71^ '02=0-1@36! I3-0:4.-T!*11.:3543.7!/.-!4@0!
               *>J57:02074!./!*66030>!B6.-4!,18:@.0.P89!I+"&%X+I!X`'%X*)%`X9!!
              %7J340>!4.!10-J0!.7!,514!,-013>0741!".<7:30!*>!1.:!".2234400!4.!>040-2370!
CDccGcD!
               6.4074350!75 2 0!: @57P0!57>!/<4<-0!>3-0:43.71!./!X.-4@!* 2 0-3:57!B.:3048!/.-!4@0!
               , 18:@.0.P8!./!B6.-4!57>!, @813:50!*:43J3489!!
CDDV!!
              X. 237540>!4.!10-J0!51!, -013>074T!X.-4@! * 20-3:57!B.:3048!/.-!4@0!, 18:@.0.P8!./!
              B6.-4!57>!, @813:50! * :43J3489!
               I + " \& X + I ! X ` ' X * ) % ` X 9!
CDDVGDF!
               B::350!,18:@.0.P8!"@53-T!*11::3543.7!/.-!4@0!*>J57:02074!./!*66030>!B6.-4!
               , 18:@.0.P89!$016.713=00!/.-!.-P573?37P!B.:350!, 18:@.0.P8!,-.P-52!/.-!577<50!
               200437P!57>!10-J37P!.7!4@0!+g0:<43J0!".22344009!+&+")+I!WY!
               ' + 'W + B1\%, 9!
CDDSGDa!
              X. 237540>!4.!10-J0!51! '02=0-6546&5-P0!.7!+g0:<43J0!W.5->!./!I3J313.7!aET!
               * 20-3:57!, 18:@.0.P3:50!*11.:3543.79! I + "&\X+ I!X\\"\\X\\")\\\X!
CDDSGDa!
              X. 237540>!4.!10-J0!51!B0:-045-8!.7!4@0!+g0:<43J0!W.5->!./!4@0!$0105-:@!
               ".71.-43< 2 \text{ T!} * * 1 , + \text{ I 9!}
              +\&+") + I!WY! ' + ' W+$B1%,9!
              X. 237540>!, -013>074!6!X.-4@! * 20-3:57!B.:3048!/.-!4@0!,18:@.0.P8!./!B6.-4! j!
CDDS!!
               , @813:50! *:43J3489!
               I + " \& X + I ! X ` ' X * ) % ` X!
CDDF!
               X. 237540>!B0:-045-8^)-051<-0-!G! I3J313.7!aET!*20-3:57!,18:@.0.P3:50!
               *11.:3543.79!
               I + "\&%X + I!X`' %X*)%`X!
CDDa!
              X. 237540>!, -013>0746X.-4@! * 20-3:57!B.:3048!/.-!4@0!, 18:@.0.P8!./!B6.-4! j!
               , @813:50! * :43J348!!
               I + " \& X + I ! X ` ' X * ) % ` X!
```

```
SVVCGSVCV!!
              %7J340>!4.!-0J30M!P-5741!/.-!,-.P-52!./!4@0!B.:350!B:307:01!57>!1<25734301!
              $0105-:@!".<7:30!./!"575>5!
SVVCGSVCV!
              %7J340>!4.!-0J30M!P-5741!/.-!X543.750!B:307:0! j !+7P3700-37P! [-574!,-.P-52T!
              $0105-:@!".<7:30!./!"575>5!
SVVC
              %7J340>!4.!1<= 234!J3450!/.-!:..713>0-543.7! "B#!+g40-750!$0J30M!) 052!\ "B#!&.1!
              *7P0001!
SVVFGSVVa
              d000.M!$0J30M!".2234400!"@53-T!*:5>028!./!N37013.0.P8!57>!,@813:50!
              +><:543.7!!
SVVaGSVVb
              "@53-T!d000.M!$0J30M!". 2 234400T!*:5>028!./!N37013.0.P8!57>!,@813:50!
              +><:543.7!
SVVb
              +g40-750!$0J30M0-!\!, -. P-5 2!37!N37013.0. P8!\!k<007e1!#73J0-1348ī!"575>5!
SVVH
              +g40-750!$0J30M0-!\!, -.P-52!37!N37013.0.P8!\!': '5140-!#73J0-1348T!"575>5!
SVVc!
              &3531.7!/-.2!X.-4@!*20-3:57!B.:3048!/.-!,18:@.0.P8!./!B6.-4!57>!,@813:50!
              *:43J348!4.!I3J313.7!aE!L+g0-:310!57>!B6.-4!, 18:@.0.P80!./!4@0!*20-3:57!
              , 18:@.0.P3:50!*11.:3543.7!
SVCV!
              d000.M!$0J30M!".2 234400!\!*11.:3543.7!/.-!*66030>!B6.-4!,18:@.0.P8!
SVCS!
              +g40-750!$0J30M0-!\!)07<-0!57>!,-.2.43.7!\!':'5140-!#73J0-1348ī!"575>59!
SVCF!
```

```
CDDHGDD!
               +00:40>14.1W.<0>0-1d5:<048!*1102=08!
CDDHGDD
               +00:40>!4.!%740-:.000P3540! *4@0043:!". 2 234400!G!W.<0>0-!d5:<048! *1102=08!!
CDDDGSVVb!!!!!! " . <7:30! . /! " @53-1T!B: @ . . 0! . /!+><:543 . 7!57>! * 0030>!B4<>301T! " B # G 1 58M5->9!
CDDDGSVVb!
               ' 02=0-!./!B:@..0!".<7:30T!B:@..0!./!+><:543.7!57>!*0030>!B4<>301T!"B#G
               158M5->!
CDDDGSVVb!!!!!!! ' 0 2 =0-!" .<7:30!.7!) 05:@0-!+><:543.7!!" B # G 1 58M5->9!
               ' 0 2 =0-!./!#73J0-1348!*4@0043:!".<7:30!
CDDDGSVVb!
CDDDGSVVC!
               ' 02=0-T!"%"!B<=G: . 2 234400!.7!"-343:50!)@37Z37PT!"B#G158M5->!
SVVVGSVVC
               \%7J340 > !51! .70! ./!/ .< -6202 = 0 - 1! ./!4@0! < 73J0 - 1348!/5 : < 048! = 8!4@0! + g0 : < 43J0!
               ". 2 234400!./!4@0!*:5>023:!B07540!4.!>0J00.6!54!-06.-4!.7!5:5>023:!1457>5->1!54!
               "B#G158M5->9!
SVVCGSVVS
               ". 2 2 34400!.7!$0105-:@!\!B457>37P!". 2 2 34400!./!*:5>0 2 3:!B07540!"B#G
               1 58M5->9!
SVVSGSVVF
               +00:40>! "@53-T!". 2 234400!.7!$0105-:@T!"B#!158M5->9!
               ' 02=0-T!*:5>023:!B07540T!"B#!158M5->!
SVVSGSVVF!
SVVFGSVVb
               K *B"!\!*00!#73J0-1348!, 057737P!". 2 2 34400!/.-!#73J0-1348!*::-0>34543.7T!"B#!
               158M5->!
SVVFGSVVa
               K *B"! \cdot !+ J3>07:0!" \cdot 2 \cdot 2344001!" B#! 158M5->!
SVVa!!
               "@53-!\!" . 2 2 34400!4 . !$0J30M!* ( ,T! "B#!+514!W58!
               \#0.2(\#)-0.240601.92 cmB 2(5)0]TJETQq0.24000.240601.92 cmBT5000f(G)TjTT61ETQq0.92 c0SEQ
SVVSGSVVa
```

```
SVCS6SVCa!!!!!! B000:40>!4.!10-J0!.7!,-013>074350!) 51Z!d.-:0!\!,057737P!/.-! I 31437:43.7!
SVCSGSVCF!
               B<=6: . 2 2 34400!\!B4-540P3:!, 057737P!" . 2 2 34400!\!" . 000P0! . /!+><:543 . 7!57>!!!
               *0030>!B4<>3016! "B#!+514!W58!
SVCF!
               ' 02=0-!./!".000P0!*::-0>34543.7!".2 2 34400!
SVCF!
               "@53-!B05-:@!". 2 2 34400!\!*11.:3540! I 057!\!".000P0!./!+><:543.7!57>!*0030>!
               B4<>301!\!"B#!+514!W58!
) @0-0! 258!=0! .4@0-!: . 2 2344001!4@54!5-0!7 .4!03140>9!
<u>I 065-42 074!</u>
CDcF!
               -P573?0>!X374@!*77<50!"05-0!B2500!&0:4<-0!\!"#!W.<0>0-!
               +00:40>!51!$0105-:@!"..->3754.-9! I 0649!./!N37013.0.P8!L\71434<40>!>065-4207450!
CDcHGcc!!!!
               $0105-:@!W<000437G!>314-3=<40>!:526<1GM3>00!
               L".G:..->37540>!G! I 065-42 07450! 1.7.-1!, -.P-5 2 09!
               L\( 71434<40>!d5:<048!B02375-!!".00.f<3<2!,-.P-5209!
               L"...->37540>! I 065-4 2 07450!i.<-750! "0<=109!
CDcH!
               ' 02=0-T!*>!@.:!<7>0-P-5><540!:.2 2344009!
CDcHGcc!
               *>J31.-8!". 2 234400T! I 065-42074!./!N37013.0.P89!
CDcc!
               -P573?0>!* 20-3:57!*00357:0!/.-!10504@T!,@813:50!+><:543.7T!$0:-0543.7!j!
               I 57:09! I 31437P<31@0>!B:@.05-!*M5->!,-01074543.7T!d0=-<5-89!#73J0-1348!./!
               " .0.-5>.!:526<19!
CDccGcD!
               [-5><540!". 2 2 34400T! I 065-4 2 074!./!N37013.0.P89!
CDccGcD!
               +J50<543.7!". 2 234400T!$06566.3742074!". 2 234400T!I065-42074!./!
               N37013.0.P89!
CDcDGDV!
               B05-:@!". 2 234400T! I 065-42074!./!N37013.0.P89!
               "@53-!G!B60:350! `66.-4<7348!13-09!
CDcDGDH!
               K 00/5-0!" . 2 2 34400T! I 065-4 2 074! . /!N37013 . 0 . P89!
CDDC!
               -P573?0>!-043-02074!:0-02.7301!/.-!4M.!/5:<048!202=0-19!!
CDDS!
               B45-40>!#7>0-P-5><540!N37013.0.P8! '51.-1!"0<=!57>!37343540>!>065-4207450!!
               [-5><543.7!"0-02.73019!
CDDSGDF!
               B05-:@!". 2 234400T! I 065-42074!./!N37013.0.P89!
```

```
CDDFGDa! ,-.P-52!$0J30M!,5700T! I 065-42074!./!N37013.0.P8!
!
CDDaGDb! B05-:@!".2234400T! I 065-42074!./!N37013.0.P8!
```

```
, 18:@.0.P3:50!W5131!./!1<257!, 0-/.-257:0!L[-5><540Q!
"@30>-07!37!B6.-4A!, 18:@.0.P3:50!".713>0-543.71!L#7>0-P-5><540Q!
"-343:50!)@37Z37P!37!'.4.-!W0@5J3.-!L#7>0-P-5><540Q!
,05Z!, 0-/.-257:0!L#7>0-P-5><540Q!
)@0!B6.-4!+g60-307:0!L#7>0-P-5><540Q!
,-37:36001!57>!,-5:43:01!./!d347011!L#7>0-P-5><540Q!
,@30.1.6@8!./!B6.-4!!
```

```
1.5 > 0.087!19 * 9!) M. 6 > 3.20713.750!0.:543.7! j !>31457:0!:<01!37!1@.-4640-2!2.4.-!202.-89!#73J0-1348!
        ./!".0.-5>.T!W.<0>0-T!CDcE9!
$582.7>\text{!"9!\h7:3>07:0!./!37}\c-8!57\cdot!:@57\text{P01!37!}(\S!\5g|37!0.M!57\cdot!@3\text{P@!3}265:4!50-.=3:1!
       /.00.M37P!4-53737P9!#73J0-1348!./!".0.-5>.T!W.<0>0-T!CDcD9!
15-731:@/OPO-T! 19!*!: . 265-31.7!./!37:3>07:0!./!37]<-8!57>!6@813.0.P3:50!:@57P01!=04M007!
       4-53737P!6-.P-521!=510>!<6.7!@3P@!3265:4!50-.=3:1!57>!-<7737P9!#73J0-1348!./!".0.-5>.T!
       W.<0>0-T!CDDV9!
B0-J0>!51!/5:<048! 2 074.-!/.-!B.785!B...! 1 ... 7! [5=-300! K 301.7!57>! '3:@500! $ 0P57!L500!10:<-0>!
       "B#!d.-P3J5=00!&.5710!*00!14<>0741!6<=031@0>!4@03-!:.260040>!-0105-:@!
%7!5>>343.7!%!@5J0!10-J0>!51!57!.<413>0!-0J30M0-!.7!5!7<2=0-!./!4@0101!/-.2!"575>5!57>!
* < 14-50359!
X.-4@T!)9"9!+g0-:310!51!5!4-0542074!/.-!>06-0113.74!*!20450575081319!L,@9I9!+><:543.70T!
       #73J0-1348!./!".0.-5>.T!W.<0>0-T!CDcc9!
X.=00T!i9!) @0!37/0<07:0!./!2.>0037P!.7!14-540P301!57>!451Z!486019L,@9I9!+><:543.70!#73J0-1348!./!
        ".0.-5>.T!W.<0>0-T!CDDE9!
```