

+,-.,#'/,00121'

.

O(\$&#*,&/(%+"\$.",&(/,.\$&#,(5*P".,8*+((

'''#L'A#.@,#&'39: "%9,\I'()(FI']/9.&',6'; "\$R1X'^@1': 1L98"0';,B1%#"#81',6'P%K"#' M,B1%.&I_')*5; "0(J+*40&3/I'N,#09#1'69%-.0'

'''#L': 98@"10': 8 / "%.@&I'()(FI'] / 0"--1-'U9.@,\$.'Y"K,%X'^@%11' / %9.9`\$1-',6' +,\$%L91\$I_'6+;,;5''0()*5;*0*%>I'N,#09#1'69%-.0'

()((I]U,%Q9#2'39"2#,-9-X'^@1':1L98"0'Y"K,\$%'M%,81--'"#L'.@1'/0"--9698".9,#',6' 7\$661%9#2L_')*5;*0*%>(*<(-&"0,8("#\$(?00#&//`N,#09#1'69%-.0''

• ()(F': 90L%1L'+0"T.1%'a1?'U%9.1%-'M%9R1C')*5;*0*%>(*<(-&"0,8("#\$(?00#&//'bL9.,%9"0' +, "%LI'

C': 98@"10'/, % 5 "#C'"#L'Y1, ': 8/"##I'()((I']M%,L\$89#2'M"%" 5 1L989#1X'/"-1'7.\$L91-' 9#'.@1': 1L98"0'Y"K, %'M%,81--I_')*5; "0()5;&("#\$(B&\$;5;#&'

C'!,-@\$"'b#209-@C'"#L'd"%0'74,%1%I'()>=I'] a 192@K,%@,,L'M,B1%.&'"#L'SE>E>' A 5 K\$0"#81'/,#."8.-I_'*J*+&8*/*Q*;, "0(*L* 3 &+%>(6 "+&((>ND0X=((E=(GI')

I'()>DI']7@,%.E^959#2X'^@1'/"%81%"0'bT41%91#81',6'7,,#E.,EK1EZ101"-1L'M%9-,#1%-I_' J.#;/83&#,(R()*5;&,>'>GN*0X**(E*cGI''

<1%%9#2C'/@%9-C': "#\$10'Z,-"0L,C' C'"#L'+1#H"59#'7@1-."Q,6-Q&'N1`\$"0'"\$.@,%-0I'()>DI']Y9B9#2'^@1,%&X'M%9#89401-'"#L'M%"8.981-'6,%'^1"8@9#2'7,89"0'^@1,%&'b.@#,2%"4@98"00&L_' F&"58;#%()*5;*0*%>'**NF0X>GGE>SSI''

()(FI']7,89"0'^@1,%&X'U@".C'U@,C'<,?I_'M4I'GcESc'9#'-"#\$4**E(*<(F&"58;#%("#\$(:&"+#;#%(;#()*5;*0*%>C'1L9.1L'K&'7IAI'/"K%1%"'"#L'7I'7?11.I'/@10.1#@"5C'PdX'bL?"%L'b02"%' M\$K09-@9#2I''

()((I'Z1B91?',6'!"51-'3,\$81.E+"..01V-']7?11.#1--'9#'.@1'+0,,LX'Z"81C'Z9-QC'''#L' ^&41'('39"K1.1-I_'23&+;5"#(@*.+#"0(*<()*5;*0*%>'>(=ND0X>S(*Ec'

()()I']/Wef3E>S'''-'7,89"0': \$\L1\X'M\$..9#2'/"49."09-5',#'^\9"0I_')Q&5,+&I''

• [1".\$%1L',#':&<, - **E&\$''

() (>I']A' / ,#-.%"9#1L'M@,..,Eb.@#,2%"4@&',6'P%K"#'A5K\$0"#81'W41%".9,#-'9#' / "096,%#9"I_'*L*,8#*%+*"Q*8;5(6*"*<SI''

I'()()I']A5K\$0"#81'/%1?-',#'.@1'[%,#.'Y9#1-',6'P%K"#'7\$661%9#2I_'F8&(*LT*.;,>(*A&/&*"+58(?#/,;,.,&I''

• Z14, -.1L'K&'F8&(=#;D&+/;,>(*<(6'');<*+#;''(J+&//(!0*)))

() ()I'] < , ?''''g/ "05 '+16,%1'.@1'7.,%5V'f-'/@"#29#2'A 5K\$0"#81'W41%".9,#-'6,%'U,%Q1%-'''#L'M".91#.-I_'=) $6(K^{*+\#/;<\&(G\&7/I'')})$

• Z14,-1L'K&'B&\$;5"0(UQ+&//''#L'F8&(=#;D&+/;,>(*<(6"0;<*+#;"(J+&//(!0*%('

O(\$&#*,&/(%+"\$.",&(/,.\$&#,(5*P".,8*+((

),+&,58&\$(F8;#1(V&0<''+&(V*+E&+/(;#(,8&().<<&+;#%(6;,>I'N\$#L1%'8,#.%''8.C'P#9B1%-9.&'',6'/ ''096,%#9'''M%1--0'

 $\label{eq:constraint} \begin{array}{l} \label{eq:constraint} \label{eq:const$

%1B91?0'

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()(F'	^@1'f#9.\$.1'6,%'.@1'Y9K1%"0'A%C' : 9#,%';%"#.'Nj(CFc)0' +,,#'/,00121'
()((' '	^@1'f#9.\$.1'6,%'.@1'Y9K1%"0'A%C' : 9#,%';%"#.'Nj(CFc)0' +,,#'/,00121'
()(>'	P#L1%2%"L\$".1'Z1-1"%8@'A,89".1-'M%,2%"5'NjDC)))0' P#9B1%-9.&',6'7,\$.@1%#'/"096,%#9"''
()()'	P#L1%2%"L\$".1'Z1-1"%8@'A,89".1-'M%,2%"5'NjFC(c)0' P#9B1%-9.&',6'7,\$.@1%#'/"096,%#9"'
()>S'	P#L1%2%"L\$".1'Z1-1"%8@'A,89".1-'M%,2%"5'Nj*CD=c0' P#9B1%-9.&',6'7,\$.@1%#'/"096,%#9"'
()>G'	+0\$5'f#9.9".9B1',#';0,K"0'"#L'Z129,#"0'M,B1%.&';%"L\$".1'[100,?-@94'Njc))0' 78@,,0',6'M\$K098'M,098&C'P/'Z9B1%-9L1''
()>='	P#9B1%-9.&',6'/"096,%#9"'391%.".9,#Eh1"%'[100,?-@94'Nj(FCc))0';%"L\$".1'39B9-9,#C'P/'+1%Q101&'
()>D'	3,8.,%"0'/,5401.9,#'[100,?-@94'Nj>GC)))0

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; %"L\$".1'39%18.1L'Z1-1"%8@'/%1L9.'

-]:92%".9,#'"#L':1L989#1_'N["00'()(>0'
-]7.".1'M, ?1%C'bB98.9,#C'"#L'b.@#,2%"4@&_'N["00'()(>0'
-]/"%1'"#L'/,#.%,0',6'P#%\$0&'M,4\$0".9,#-_'N["00'()>S0'

P#L1%2%"L\$".1'39%18.1L'Z1-1"%8@'/%1L9.'

-]Z"89"0'f#1`\$"09.&'"#L': ".1%#"0'<1"0.@_'N74%9#2'()()0'
-]/"49."00'Y"K,%0'"#L'.@1'a".9,#"0'[,,.K"00'Y1"2\$1_'N74%9#2'()()0'
-]<, 5101--#1--'9#'<, #2'd, #2'"#L'Y, -'A#2101-_'N["00'()>S0'

]+,,Q'^"0Q-_'6,%'*!* "#\$"%&'()*+,'("#\$(-./,0&'

- >)k((' P#9B1%-9.&',6'/@98"2,C'^@1'/%,?#'["590&'78@,,0C'/@98"2,C'fY'
-)*k(>' P#9B1%-9.&',6': "%&0"#L'+"0.95,%1'/,\$#.&C'b51%21#8&'<1"0.@'71%B981-'N%15,.10''
-)Fk(>' P#9B1%-9.&',6': 9##1-,."C'314"%.51#.',6'7,89,0,2&'N%15,.10''
- >)k()' a h PC'314"%.51#.',6'7,89,0,2&C'b.@#,2%"4@&'U,%Q-@,4'N%15,.10'

WXCYW(

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)Sk()' e 9%.\$"0'+,,Q'Y"\$#8@C'?9.@'8,551#.-'6%,5'3"B9L'+%"L&'NP / 'Z9B1%-9L10C'a 190';,#2'' NP / '7"#'3912,00""#L'^"#9"'!1#09#-'NP a / '/@"410'<9000I': ,L1%".1L'K&'A##'W?1#-'NP7/0

/ ,#61%1#81'M%1-1#.".9,#-'

-]^, ? "%L'"'7, 89,0,2&',6': 1L98"0'Y"K,%'"#L'M1L"2,2&I_'^@1'7,89"0'^%"#-6,%5".9,#',6'.@1)Gk(F' 7,89"0'^%"#-6,%5".9,#',6'.@1'7,89,0,2&',6'<1"0.@'M%,61--9,#-'bL\$8".9,#C'A51%98"#'' 7,89,0,298"0'A--,89".9,#'M%18,#61%1#81'N9#B9.1L'4"#100C'M@90"L104@9"C'MAI''
- Dk(F')]Z161%%"06"%1X'U106"%1'U,%Q1%-'"#L'.@1'[%"251#.1L'7.".1I_'Y"?'"#L'7,891.&'A--,89".9,#'
- N9#B9.1L'4"#100C'7"#'!\$"#C'M\$1%., 'Z98,I''
-)*k(F']Z1-4, #-9K909R9#2'''#L'M%, 01. "%9"#9R9#2'U106"%1'U, %Q1%-'9#'Y, -'A#2101-I_'f#.1%#".9, #"0'' Y"K, %'M%, 81--'/, #61%1#81C'; 0"-2, ?C'78, .0"#LI''
-]^@1'Y959.-',6'+,\$%L91\$-9"#'/0"--'A#"0&-9-_'?k':98@"10':8/"%.@&'N:"%`\$1..1'' >>k((' P#9B1%-9.&0I'+,\$%L91\$C'U,%QC'f#1`\$"09.91-'/,#61%1#81C'M"%9-C'[%"#81I''
- >>k((']/,##18.9B1'Y"K,%'"#L'7.%11.EY1B10'+\$%1"\$8%"8&I_'A 5 1%98"#'A#.@%,4,0,298"0'

)Gk(>'

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-)*k>=']Y,-9#2'7,\$0X'A#'b5K,L91L'b.@#,2%"4@&',6'A5K\$0"#81'U,%QL_'' M"89698'7,89,0,298"0'A--,89".9,#C'M,%.0"#LC'WZI'
-)*k>=']M"%,016"%1X'M,-.EM%9-,#'7\$41%B9-9,#'"#L'.@1'Y,?EU"21'Y"K,%':"%Q1.I_'' M"89698'7,89,0,298"0'A--,89".9,#C'M,%.0"#LC'WZI'
-)Fk>*']A-49%".9,#-'"#L'7.%".1291-',6'7,,#E.,EK1EZ101"-1L'M%9-,#1%-I_'' M"89698'7,89,0,298"0'A--,89".9,#C'M,%.0"#LC'WZI'
-)Fk>>']f#B1-.51#.'7.%".1291-X'718\$%9#2'NZ10f#.12%".9B1'Z1-,\$%81-'+1@9#L'+"%-I_'' M"89698'7,89,0,298"0'A--,89".9,#C'71"..01C'UAI'

f#B9.1L'^"0Q-'.,'/0"--%,, 5-C'Z1-1"%8@'/1#.1%-C'"#L'U1K9#"%-''

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71%B981'.,'.@1'314''%.51#.',6'7,89,0,2&C'+,-.,#'/,00121'N()((E4%1-1#.0'

- ; %"L\$".1'AL59--9, #-'/, 5 59..11'N()((E()(*0'
- 78@,0"%0&'bB1#.-'/,559..11'N()((E()(*0''

71%B981'.,'.@1'P#9B1%-9.&C'+,-.,#'/,00121'N()((E4%1-1#.0'

- ["8\$0.&'M"%.9894"#.C'<"06.951'Z1.%1".C'/1#.1%'6,%'7.\$L1#.'[,%5".9,#'N()(F0'
- : 1L98"0'<\$5"#9.91-': 9#,%'AL59--9,#-'/,559..11'N()(FE()(*0'

71%B981'., '.@1'314"%.51#.',6'7,89,0,2&C'P#9B1%-9.&',6'7,\$.@1%#'/"096,%#9"'N()>GE()((0'

- 74, #-, %9#2'["8\$0.&C'^@1'P7/'7,89"0'^@1,%&'+,,Q'/0\$K'N()()E4%1-1#.0'
- /,00, `\$9\$5'/,559..11'N()>GE4%1-1#.C'/,E/@"9%'()(>E
- W%2"#9R1%k: ,L1%".,%C'M"#10',#'^1"8@9#2'7,89,0,2&'9#'/,55\$#9.&'/,00121-'N()(>0'
- ["8\$0.&'71"%8@'/,559..11'N()()0'
- [6"#5&0&\$'(6 \ M?K](6*P \ +%"#;b&+'()*.,8C)*.,8(6+;,;5"0(L,8#*%+"Q8;&/(V*+E/8*Q((/,559..11'N())>G0'