



! " # \$ % & ' () * \$) + + % , + & % # -) . () / # (% 0 - 1 \$ % - 2 3 / # - % - 4 3 . % (# -

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



H*3*85*085*+*8733-: 7="0-9-: 7"J?A7"[KK(K#(KK\0" _ *02: 85-<"_ *Y9="@"
67. *: 7, \a7: 23"E*8, 2"678E7H7" _ *02: 85*+* _ *Y97"@E*5-1?, "+*88, ?4. ?="

D*: @312"E62H, 7+7, *8; "*8: 7: ; 8@17"+*88, ?4. 2"0") GI 2"1*"@"12"8: 7, "

0*9067W7: ; 8@0") GI \g": *+H7"67. *: 7, "0"7EE767: 2"E629-H21: 7" ____%="

8: 707, 8@28: 28: 0211"0"A: 7: 2") GI 7="1*"0") GI "12"8: 7, "0*9067W7: ; 8@I"G"8"

[!T\T#C+*"+*H7"67. *: 7Y"0*: "9H28; "0"\$*6. 7B20>*1H2W"Q?"*1": *+H7". /, "12"

9H28; \ " #KK!"+*H?="5*+H7"978: ?E-, "17"E*8: "E629-H21: 7" I 4*6H4"J?A="@"

67. *: 7, "9H28; "0"57B28: 02"6?5*0*H-: 2, @8, ?4. /"324H?176*H1/D"80@92<"-"

5*1: 75: *0"8"E6288* <I"G"H"*8-D"E*6"9H28; "67. *: 7Y\W"S*: ": 757@"576: -17W"

\$%&' (" 75". /"0/"*e21-, -"178, 2H-2"\$*6. 7B207"H, @8*02: 85*C6*88-<85-D"

*: 1*A21-<="17B-17@8"[!T\T!C+*"+*H7F" 75"*1"E*H02, ="575?Y". 79?"*1"

*8: 70-, ="?D*H@="-"575"*17"321@, 78; "0": 2B21-2"[!T\TKCDF"

LMNMOP&Q' R(%*88-<85*C7326-57185-D"*: 1*A21-<"0/"-322: 2"0"0-H?="H7F"

\$%&' ("I 7W"

LMNMOP&Q' R(I 7W"R1"*8: 70-, ". 79?="17"*81*02"5*: *6*<"3*41*". /, *H7, ; A2"

67. *: 7: ; \c: *"12": *, ; 5"*8*+, 7A21-2"E*"@H261*3?0**6?421-Y="E*"

67H-57, ; 1*3?8*567W21-Y"@H261/D"0**6?421-<\g"17E*31Y="Z: *"H*+*0*6"

_Q\$="Z: *"H*+*0*6"_QS"X"E260/<_"QSI""Q"*12"32122"0741/"X""Z: *: 75"

179/0723/2"E629-H21: 85-2"-1-e-7: -0/"E*"67H-57, ; 1*3?8*567W21-Y"

: 75: -B285*+*@"H261*+***6?4-@"-@"H261*+***6?4-@"37, *<"H7, ; 1*8: -="0": *3"

B-8, 2"3*685-D"@H261/D"0**6?421-<"-@"H261*<"76: -, , 26--\Q7B7, 8@"



. /8: 6 / < " * B21 ; " E6 * e288 " 0 / 0 * H7 " 7326 - 57185 * + * " @ H261 * + * " * 6 ? 4 - @ " - 9 "

[KK(Kh(KK\&06 * E / = " - 9 " \$26371 - -- " - 9 " H6 ? + - D " 8 : 671V ""

Q78, 2H - 2 " 0 " * . , 78 : - " 0 * * 6 ? 421 - @ = " 5 * 12B1 * = " 5 * , * 887 , ; 1 * 2V " Q * " . / , " - "

1 * 0 / < " Z , 2321 : " E * 3 - 3 * " Z : - D " 8 * + , 7A21 - < = " 5 * : * 6 / 2 " 082 + H7 " . / , -- " 1 * " 12 "

: 75 - 2 " 378A : 7 . 1 / 2 = " 5 * 12B1 * V " L * @ 0 - , 8 @ " Z , 2321 : " * E62H2 , 211 * + * " H * 026 - @ V "

R1 * = " 679 ? 322 : 8 @ = " 12 " 3 * + , * " . / : ; " E * , 1 / 3 = " 1 - 5 : * " 12 " . 67 , " 1 - B2 + * " 17 " 026 ? = "

1 - 5 : * " 12 " E * , 7 + 7 , 8 @ " 17 " H * 026 - 2 " 575 " : 75 * 0 * 2V " Q * = " 5 * 12B1 * = " Z : * : " Z , 2321 : "

E * @ 0 - , 8 @ = " - " Z : * : " Z , 2321 : " . / , " 97562E , 21 " : 23 = " B : * " ? H7 , * 8 ; " - 9 . 2 + 7 : ; "

* . * 8 : 621 - @ " - " 0 * " 0623 @ " * . i 2H - 121 - @ " \$26371 - -- " 5 * : * 6 * 2 " A , * " 8 " * B21 ; "

. / 8 : 6 * < " 85 * 6 * 8 : ; Y = " - " 0 * " 0623 @ " 56 - 9 - 87 = "



178, 2H-2"\$*6. 7B207="5*: *6*2"*1"*8: 70-, "[KK(Kj (KK\`6*88-<85*3?"

6?5*0*H8: 0?V""

\$%&' ("S": 2B21-2"[!T\TKCD"575". /"0/"*E-87, -: *="575"Z: *"178, 2H-2"6790-07, *8; F"

) *42: ". /: ;="0"E, 712". /, -"0/"="857423="?H*0, 2: 0*621/"575"*H-1"-9k": 23="

575"6790-07, -8; "Z5*1*3-B285-2"*: 1*A21-@="17E6-326F""

LMNMOP&Q' R("Q?"@8, 2H-, "97": 23="B: *"E6*-8D*H-:="D*: @". /, "?42"012"

+*88, ?4. /="12"971-37, 8@5*1562: 1*"Z: -3-"0*E6*873-="1"*8, 2H-, "0": *3"

B-8, 2="E*: *3?"B: *) -D7-, "_26+220-B"[\$*6. 7B20\`B78: *"29H-, "0" _ ` @785-DoQQq8. BT500050



5*: *6/<"02, "Z: *: "E6*e288"E*8*, "d*, . 6?5="8*026A211*="H23*18: 67: -01*"12"

*. 67W7, "01-371-@"17"6*88-<85?Y"E*9-e-YW"G"56*32": *+*="5*12B1*="



H?37Y="B: *"-3211*": *+H7"0"8*9171--"917B-: 2, ; 1* <"B78: -"6?885* <"Z, -: /="-"
0": *3"B-8, 2?"L?: -17="5*: *6/<"?42": *+H7"971-37, "12"E*8, 2H1-2"328: 7="
976*H-, 78;"0*: "Z: 7"3/8, ;="7"-3211*="]&8, -"7326-571e73"Z: *"3*41*"
H2, 7: ;"0"H6?+* <"8: 6712=": *"E*B23?"3/"12"3*423"0"80*2<"8: 6712="0"%*88--"
8-, * <"62A-: ;"B2B2185-<"0*E6*8F^"g"H?37Y="B: *": *+H7="1?"0*: "Z: *". /, *"
E6-"7H3-1-8: 67e--" , -1: *17""

RH1*0623211**"B23C: *": 73"H*+*076-07, -8;"E*"L%R"E*"125*: *6/3"
E62H2, 21-@3="1". /, *"@81*="B: *"H, @": *+*="B: *. /"E*8: 6* -: ;"*81*0?="
3*42: ". /: ;="H, @"575* <C: *". ?H?W2<"H*+*0*6211*8: -"679H2, 21-2"



+*0*6-:;*"B, 218: 02"\$6?9--"- "I 567-1/"Q7"3* <"09+, @H="E8-D*, *+-B285-<"

3*321:="3*321: "* . -H/"5*: *6/<"8: 7, "B?: ;"12"8: 264123"6*88-<85* <"

E*, -: -5-"0"*: 1*A21--"a7E7H7="-"0": *3"B-8, 2"_` M="*1"8*026A211*"12"

?B-: /07, 8@!"



LMNMOP&Q' R("L *31Y"*B21;"D*6*A*="H7V""

\$%&' (" 75". /"0/"*e21-, -"Z:?"08:62B?F"G"3*+, -". /"0/"86701-: ;"575-20: *", -B1/2"



:2, 2+6733?=@E*. 247, "



X"1?"Z: *082"917Y: ="B: *8*8: *6*1/"L?: -1/" . / , *8H2, 71 *="H?37Y="082"

0*93*41*2"H, @": *+*="B: * . /": 75?Y"D-3-Y"8*9H7: ;="[KK(##(KK\0": *3"B-8, 2="



P: *57872: 8@H*+*0*67"E*L%R"X "28, -"82<B78"E*83*: 62: ; "8"0/8*: /"
E6*A2HA-D"#K", 2:=: *"8*026A211*"12"1?41*"/, *M326-52"-9"12+*"
0/D*H-: ;V") *41*"/, *E*HE-87: ;"H*E*, 1-: 2, ; 1/<"E6*: *5*, ="679328: -: ;"
Z: -"j K"E262D07: B-5*0"17"M, @852"-H*+*0*6-: ; 8@"*": *3="B: *8: *6*1/". ?H?: "
01*8-: ;"?: *B121-@"0"H*+*0*6"E?: 23"H*E*, 1-: 2, ; 1/D"E6*: *5*, *0", Y. /DV"
Q-B2+*"42"12". /, *V"Q2"E*8: 6*- , -"42"*1-"Z: *: "] | }rxp~pvo^=": 75"85797: ;="
12E6*1-e723/<"5?E*, V"Q2"E*8: 6*- , -V"Q?"97B23"0/D*H-: ; F"c: *". /, *="
5*12B1*="E8-D*, *+-B285-="*E@: ; C: 75-""X""@082"0623@0*9067W7Y8; "5"



5*12B1*="1-5: *"12"026-, ="1**+*: *0/". /, "679+*076-07: ;V"L *: *3"?42"X"1?"
Z: *. /, *"8H2, 71*": 75V"Q7"3* <"09+, @H="3*41*". /, *. /"8H2, 7: ; "E*CH6?+*3?="

- "08@5-<"679"12"?B-: /07, 78; "0*: "Z: 7"0*: " *. -H7V"R. -H7="5*: *67@"17678: 7, 7"
17" _ ` M=" * *. -H7="*81*07117@"2W2"- "17"B?08: 02": 75* <": 6703-6*0711*8: -"0"
80@9-"8"678E7H*3" ____%V"S*: "3/"%*88-@"X ""2H-18: 02117@"628E?. , -57"17"
82+*H1@A1-<"H21;="5*: *67@"-8E/: /072: "Z: ?": 6703?V"G9"!b"628E?. , -5""X ""
H17V"R. -H7"17678: 7, 7V"M"5+H7"*H1**629*1-6?2: "8"H6?+-3=": *E*, ?B72: 8@="

E@: ; C: 75-="E8-D, *+-B285-"*B21; "12D*6*A7@"7: 3*8>267"H, @"679+*0*6*0V"
I "321@": 75*2"0E2B7: , 21-2="B: *E6-"0823"3*W12<A23"7EE767: 2"
717, -: -B285*3="5*: *6/<"28: ; "0" _ ` M"0*: 1*A21--"%*88--="0": *3"B-8, 2"- "0"
+*8H2E76: 7321: 2="0"E*8*, ; 8: 02"X "@917Y"31*+-D"-9"Z: -D", YH2<"X"1*"Z: *"
12"?B-: /07, -"8*026A211*V"G"0"%*88--"Z: *. /, *"0*8E6-1@: *575": 75*2"
E6296-: 2, ; 1*2="?1-9-: 2, ; 1*2**": 1*A21-2"5"%*88--V"g"8B-: 7Y="B: *567<12"
E62?02, -B21*"Z: *="567<12"E62?02, -B21*V"g"8B-: 7Y="B: *0/"82. @"873-"
09H6YB-07, -"Z: -3"0823="0": *3"B-8, 2"Z: *0*: "QMmR="L%RV""

S*211/2"17A-"082"0623@"+*0*6@: ""L%RV"g"-D"8E67A-07Y("]S*: "
E*83*: 6-: 2="0/A, -"*1-"[7326-571e/\": *+H7="B: *82<B78C: *F^V""X ""]Q?"0*: "
*1-": *E*8: 6*- , -="Z: *E*8: 6*- , -^V"Q?"Z: *42"26?1H7V"C: *1-575"12"0, -@2: "
17"17A"E*: 21e-7, "*: 02: 1*+*"?"H767V"Q?"0*: "575"073"67885742: "S-5: *6"
G071*0-B"[&8-1\="5*+H7"0/". ?H2: 2"8"1-3"+*0*6-: ; ="@17H2Y8; ="8679?"E*8, 2"
0/D*H7" _ ` M"-9"H*+*0*67"E**L%R="H*8: 7, -"-9"A57>*0"-5*3E; Y: 26*0"
8: 76/2"67967. *: 5-"8*02: 85-2"E**+-E2690?5*0*3?"*6?4-Y="E**0823"Z: -3"



]J?62028: 1-573^="E*"0823"H6?+-3"862H8:073="5*: *6/2"[KK(fK(KK\L"?: -1"
71*18-6*07, "0"!UC3"+*H?"-"17B7, --D"?85*6211?Y"67967. *: 5?V" *+H7"0"D*H2"
575-DC: *"E62H076-: 2, ; 1/D"5*1: 75: *0"E*8*, "17A"+*0*6-, "[3-1-8: 6?"
*. *6*1/"I *17, ; H?\%738>2, H?="B: *("]S/"E*1-372: 2="B: *"3/"42"H*, 41/"
575C: *"627+-6*07: ; F") /". ?H23"H2, 7: ; ": 73"575-2C: *"02W-^="12"+*0*6-, ="
5*12B1*="B: *. ?H?: "H2, 7: ; V%738>2, H"8E*5*<1*"17B7, ("]I 2, 7<: 2"B: *"
D*: -: 2V"Q73"12"1?D1*"[128, /A1p\k") /"12". ?H23"* . 8?4H7: ;="B: *"0/" . ?H2: 2"
H2, 7: ; ^"-": 75"H7, 22V"Q?"-"17B7, *8;V"



E670-, ; 1*="B: *"17H*"8*: 6?H1 -B7: ;="B: *": 266*6-93"-": 75"H7, 22V"

RE62H2, 211/<"8, *<", YH2<=". /, "?42": *+H7="5*: *6/2"627+-6*07, -"

E6-3261*": 7542"575"125*: *6/2"767. /("D, *E7, -"0", 7H*A5--"67H*07, -8;V"

c: *"12"*B21; ". /, ". *, ; A*<"8, *<V"S"*81*01*3". /, *. *, ; A*2"8*B?08: 0-2"-"

42, 71-2"E*3*B;V"

\$%&' ("S/" - 322: 2"0"0-H?"0"7EE767: 2F""

LMNMOP&Q' R("S"7EE767: 2"12: V"[KK(f#(KK\S"7EE767: 2": *B1*"12: ="@H?37YV"Q?"

3*42: ". /: ;="*: H2, ; 1/2", -e7": 75-2". /, -="1*"7: 3*8>267". /, 7": 757@="B: *"

+*0*6-: ;"* . "Z: *3"62A7, -8;": *, ; 5*"7. 8*, Y: 1/2"376+-17, /="1?"-"0*:", YH-="

5*: *6/2"17". 79761*3"?6*012"-1: 2628?Y: 8@"3-6*0/3-"8*. /: -@3-"0"

-1: 2612: 2"- , -"+H2C



6790-: -2"8*. /: -<|" 75". /"0/"*: 627+-6*07, -"17": 75*2"?: 0264H21-2F"P23="

E*07A23?="8: 7, 7"-675857@0*<17"H, @%"*88--F"

LMNMOP&Q' R(") 12"Z: *"5742: 8@*B21; "37, *026*@: 1/3V") 12"5742: 8@="B: *"

-675857@0*<17"E6*8: *"H*. 70, @, 7"2W2". *, ; A2"*. -H/"17"M326-5?="B: *

M326-57"12"?B, 7"E*9-e--"12": *, ; 5*%"*88--="1*" -"H6?+-D"8: 671="B: *

M326-57"E*CD*9@<85--=: 75"85797: ;="02H2: "82. @"0"3-62="1-"5"5*3?"12"

E6-8, ?A-072: 8@="[KK(fh(KK\": 23". *, 22="12"E6-8, ?A-072: 8@"5%"*88--|"m75"

B: *="312"Z: 7"5*18E-6*, *+@="B: ***1Qq0. 2428. 2(2"Z) -0. 4(:) -0. 4(7"5) -0. 3(*) 0. 5(1) "5



LMNMOP&Q' R("g. /"12"17907, "Z: *E6*H*, 421-23"678E7H7W"%78E7H"28: ;"678E7HW"

S*: "*"1"E6*-9*A2, "-E6*-9*A2, V"l 7, ; A2"?42"082"970-8-: "*" : "*" += "B: *"

E6*-8D*H-: "0"*: H2, ; 1/D"8: 6717D"S"6791/D"8: 6717D"E6*-8D*H-, *"082"082C

: 75-"E*06791*3?V"

&8, -"+*0*6-: ; "*"e02: 1/D"620*, Ye-@D=: *E*H"Z: ?"6?. 6-5?"E*H0*H@: "

82<B78"l 567-1?=" /6+/98: 71="\$6?9-Y="28, -"12"*A-. 7Y8; ="_26. -Y=" -"

E*47, ?<="082V"M"0"H6?+-D"628E?. , -57D". /, *"082"7. 8*, Y: 1*"E*06791*3?V"

Q-575-D"e02: 1/D"620*, Ye-<"12". /, *"[KK(fj(KK\"28: 28: 0211*"0"+*8?H768: 02"

J7, : --V"R. *A, *8; ". 29"1-D"0") * , H*02V"R. *A, *8; ". 29"1-D="1*"?"42"E*"

H6?+-3"E6-B-173="082C: 75-"@8B-: 7Y"B: *J7, : -@"-") * , H*07=: 73"

1285*, ; 5*"679"E6*-9*A, 7="H742") * , H*07("6*: 7e-@"0, 78: --"83217"0, 78: -V"

Q?"*: 1*8-: 2, ; 1*"0/. *6/"12"8: 70@: 8@E*H"8*3121-@"0": *3="B: *"- "

E*8, 2H1-2"0/. *6/=5*: *6/2"E6*-+67, "E629-H21: ") * , H*0/V"Q?"

628E?. , -57"*B21; ". 2H17@=: @42, 7@="1*": 23"12"32122=: 73"0*: "-H2: ": 75V"G"

170261*2=: 75-"H*, 41*="0"* . W23=-H: --"E*: *3?"B: *": 73"31*+*"12": 75="575"0"

H6?+-D"628E?. , -57DV"Q-B2+*"E*H*. 1*+*"12". /, *"0"M926. 7<H4712="E*: *3?"



620*, Ye-<V"R: 12821-2"5"e02: 1/3"620*, Ye-@3"5-6+-985-D"8*. /: -<"
 1231*45*"8*31-: 2, ; 1*="1*"3*41**": 128: -="3*41*V"m75"B: *="12"0-4?"@"
 9H28; "575*+*C: *"97E7H1*+*"97+*0*67=-="0**". W2="378A: 7. /"Z: *+*"@0, 21-@="

17"3*<"09+, @H="8-, ; 1*"E62?02, -B21/V"
 P: **. i 2H-1@2: "082"Z: -"8: 671/F"R. i 2H-1@2: ": *="B: *"E6*: 28: "
 17B-172: 8@"8">7, ; 8->-57e--"0/. *6*0V"g"H?37Y="B: *"0"17-. *, ; A2<"3262"
 Z: *"E6*-9*A, *"0"l 567-12V"S"1285*, ; 5*"321; A2<"3262"[KK(fU(KK\0"\$6?9--="

3/"0-H-3=">7, ; 8->-57e-@": *42". /, 7V"M"+, 701*2="?42"E*H6*8, *"1*0*2"
 E*5*, 21-2"+6?9-185*<"3*, *H24-"0"B78: 1*8: -="+*, *0/"+"6@B-2="0*:"
 0/H0-1?, 8@[. /0A-<"E629-H21:") -D2-, \"_7757A0-, -"-H6?+-2"E*, -: -5--="



: *+*?. 24H21 -@=B: *a7E7H"173"0674H2. 21V"&8: ;"-H6?+-2"*81*0/V"S"

B78: 1*8: -"28: ;"125*: *6/2"H*5?321: 7, ; 1/2"*81*0/(": 2E26; "0*: "QMmR"?42"

97562E-, *0"80* -D"H*5?321: 7D="B: *"678837: 6-072: "[KK(h#(KK\%"*88-Y"575"

?+6*9?="7"8, 2H*07: 2, ; 1*"575"E6*: -01-57"-": 75"H7, 22V"Q*"0"*81*02="@H?37Y="

: *??. 24H21 -2="5*: *6*2"8, *4-, *8; "0"E*8, 2H1-2"!b="#K", 2: =B: *a7E7H"E, 2: 2: "

1-: -"97+*0*67"0"-1: 26287D"*8, 7. , 21--"%*88--"B2629"128: 7. -, ; 1*8: ;="

B2629"e02: 1/2"620*, Ye--"-": 75"H7, 22V"c: *??. 24H21-2"8, *4-, *8; "

B6290/B7<1*"E6*B1*V""

\$%&' ("L629-H21: "L?: -1"E6*-9128"-9028: 1?Y"62B; "17"3Y1D2185*<"5*1>2621e--"

E*". 29*E781*8: -"0"#KKt"+*H?="H2"E*H026+"_` M"56-: -52"575"

H28: 7. -, -9-6?YW?Y"H26470?="]E6212. 62+7YW?Y"*81*01/3-"E6-1e-E73-"

324H?176*H1*+*"E6707^V""

LMNMOP&Q' R("M"0*: "28: ;": 73"Z: 7">6797="B: *"_` M"H28: 7. -, -9-6?YW7@"

H264707F""Q7"8B2: "E6212. 62421-@"5"324H?176*H1*3?"E670?="Z: *"H7="Z: *

. /, *V""

\$%&' ("I 28: 7. -, -9-6?YW2<"12"0"570/B57DV""

LMNMOP&Q' R("M"1?"0*: V"L*Z: *3?"9H28; "@. /"12"8: 7, "8679?": 75"62B; "3Y1D2185?Y"

X"@B-: 7, ="12"082"312"0"12<"E*1670-, *8; "X"1*="312"5742: 8@="B: *

E62?02, -B-, -"E*0*6*: 1/<"Z, 2321: "0"Z: *<"62B-="B: *Z: *"E6@3**

E*0*6*: 1/<"E?15: V"Q2: =Z: *"E*H02H21-2"-: *+*0": *<"620*, Ye--="5*: *67@"



B-8, 2="E*: *3?"B: *="12"83*: 6@"17"Z: ?"62B; ="575C: *"22"17H*"/, *"?B28: ; "0"
E*, -: -52V"Q283*: 6@"17"Z: ?"62B; ="?E*61*"a7E7H"E6*H*, 47, ="0": *3"B-8, 2="
H25, 767: -01*"178: 7-07: ; "17"E62412<"E*, -: -52V"Q?"-"0"\$6?9--"3/"
?0-H2, -="B23"Z: *5*1B-, *8; ="E*: *3?"B: *="@"H?37Y="Z: *"/, ". *, ; A*<"
E6*8B2: "_7757A0-, -V"R1"8B-: 7, ="B: *M*"1"83*42: "H*0*, ; 1*"/8: 6*"
975*1B-: ; "E*HB-121-2"_20261*<"R82: -2<="8"M. D79-2<"?"12+*"12"/, *"
: 75-D"E, 71*0W"G"J*B: *a7E7H"E*HH264-: "Z: *V"[KK(hh(KK\I "12+*"-"
E*HH26457"a7E7H7"/, 7*"B21; "*"1*8-: 2, ; 1*="-"/8: 6*"975*1B-: ; "*"1"12"
83*+V"

g"/, "8"H2, 2+7e-2<_"*02: 7"&06*E/="5*3-8876*3"E*"E67073"B2, *0257"
_"*02: 7"&06*E/"0"_20261*<"R82: --". ?507, ; 1*"B2629"12H2, Y"E*8, 2"
*5*1B71-@. *20/D"H2<8: 0-<V"G"1708: 62B?"173"X"3/"E6*2D7, -"%*585-<"



B, 21*3"QMmR^I 567-17". ?H2: "B, 21*3"QMmR^I"G"E8-D* , *+-B285-"Z: *2+*="

312"5742: 8@="H29*6-21: -6*07, *V"g"H?37Y="B: *Z: *H2<8: 0-: 2, ; 1*"

E*0*6*: 1/<"E?15: =0*: "Z: *. /, "E*0*6*: 1/<"E?15: =7"12"3Y1D21857@"62B; V"

L*8, 2"3Y1D2185* <"62B- "2W2"3*41* ". /, *k""g"+*0*6-, ": *+H7="12"E*31Y="

5: *2+*"E*8, 7, ="



\$%&' (" * , , 2+="-9" :7: *0"+*0*6@: "": *3="B: ""*1-". /, -"?H-0, 21/"E*@0, 21-23"
 : 75* <"62B; ="-": *=B: ""*1-"8B-: 7, -=B: *Z: *. /, "]p, oxxoyfr,,p...^="E*: *3?"B: *"
 E*"0*E6*873X ""
 LMNMOP&Q' R("]R, oxxoyfr,,p...^"L?: -1?"SE*, 12"0*93*41*="7"E*: *3"E*A2, "
]p, oxxoyfr,,p...^"8*"8: *6*1/"817B7, 7"_7757A0-, -=5*: *6/<"?8, /A7, =B: *"
 \$6?9-@". ?H2: "B, 21*3"QMmR="5*: *6/<"?0-H2, =B: *8". 79/"0"67<*12"
 m. -, -8-="E6-"3-1-8: 62"*. *6*1/"[_26+223\G071*0/3="E629-H21: *3". /, "
 : *+H7"L?: -1=%*88-@0/02, 7"80*-"0*<857". 29"90?57"Q?"-"62A-, ""1="B: *("]
]S*: "H707<"@82<B78"E*H5, YB?"_20261?Y"R82: -Y"m73"082". ?H2: "
 9732B7: 2, ; 1*V"M. D79/". ?H?: "0"_20261* <"R82: --"X"0"s 41* <"R82: --^="]
 -90-1-: 2="@082"0623@*A-. 7Y8;V"]s 41?Y"R82: -Y"-15*6E*6-6?Y="0261?"
 0", *1*"37: 26-"\$6?9--V"m73="917B-:=". ?H2: "082"E*: 6@87YW2V"M. D79/"17B1?: "
 970-H*07: ; "-873-"0261?: ; 8@|^"Q?"-"B: *. /, *=" /, *V"R1"02H; "
 Z5*1*3-B285-"*B21; "?8E2A1?Y"0"80*2"0623@"



H, @"122="575"678E7H" _ *02: 85*+*"8*Y97W"Q7H*"?"B-: /07: ;"E8-D*, *+-B285-<"
 3*321: "+*679H* ". *, ; A2"0"*: 1*A21-@D"8"Z: *<"8: 671* <V"S82"0623@%"*88--"
 5742: 8@="B: *"22"* . -47Y: ="?1-47Y: ="1-B2+*"12"?B-: /07Y: ="?, /. 7Y: 8@="7"
 H2, 7Y: "082"E*080*23?W" I *, @"-8: -1/"0": 75* <*" . -H2"28: ;V"Q2, ;9@"17"* . -H2"
 8: 6* -: ;"012A1YY"E*, -: -5?="1*"H*, @"-8: -1/"0"12<"28: ;="0*:"3*2"3121-2W"
 \$%&' ("I 7="0*:"Z: *": 75* <"0*:"=0/"17907, -"*H-1"-9">?1H7321: 7, ; 1/D"E6-1e-E*0="

0-H-3*="5*:*6/2"32A7Y:"H*+*0*6-: ; 8@=": *"28: ;"12:"E*1-371-@"

E8-D*, *+-V"

LMNMOP&Q' R("L8-D*, *+-B285*+*">75: *67W"

\$%&' ("I 7="E8-D*, *+-B285*+*">75: *67W"M="575"0/"H?372: 2="0*93*41*", -". /, *="

?B-: /07@"E*8, 2H122"*: 1*A21-2"J?A7"- "L?: -17"-="0"E6-1e-E2="0*93*41*"

, -"-8E*, ;9*07: ;", -B1*2"*: 1*A21-2"324H?"E629-H21: 73-"0"67357D"

6*88-<85*07326-57185-D"*: 1*A21-<="B: *. /"E62*H*, 207: ;"125*:*6/2"



7+6288-017@-H2*, *+--@="5*: *67@D*B2: "E*HB-1-: ; "82. 2"H6?+-2"8: 671 /="

E*HB-1-: ; "82. 2"028; "3-6="B: *-3211**17"H28: 7. -, -9-6??: "3-6*0?Y"

*. 8: 71*05?"-: 75"H7, 22V"\$*6. 7B20"*: 02: -, ("]a172: 2="3/"8*. 67, -8; "9H28; "12"

H, @": *+*="B: *. /"* . 8?4H7: ; "37658-93†, 21-1-93V"l 707<: 2"* . 8?H-3": 2"

E6*. , 23 /="E, Y8"@H261/2"E6*. , 23 /="5*: *6/2"82<B78"*B21; "*"8: 6/2"-

5*: *6/2"17H*"62A7: ; ^V"G"0*: ": *="B: *": *+H7"0"O21202"E6-"082<"*8: 6*: 2"

H-85?88-<="*E62H2, 21", -B1 /<"Z, 2321: ="0"-D"*: 1*A21-@D"8: 7, "32, ; 57: ; V"

Q*"Z: *: ", -B1 /<"Z, 2321: "6790-: ="H*028: -"2+*H*"?6*01@="12E*, 1*+*="1**

E62H2, 211<"326/"H*026-@="3*41**": * , ; 5*0": *3"8, ?B72="28, -"

*H1*0623211*"62A7Y: 8@"0*E6*8 /="5*: *6/2"E*H6/07Y: "*" : 1*A21-@V"

L*HE-87, -"H*+*0*6**"6752: 7D"862H12<="321; A2<"H7, ; 1*8: -="H*+*0*6-, -8; "

0"%2<5; @0-52** . "*"81*01/D"E76732: 67D"8*567W21-@"8: 67: 2+-B285-D"

8**6?421-<="0/02, -"0*<857"-9"M>+71-8: 717V"L6-B23="1?"*E62H2, 211?Y"

6* , ; ="@8B-: 7Y=_*2H-1211/2" ` : 7: /"8/+67, -="H70"E*1@: ; "3*H47D2H73="

B: **12"17H*"E*, ; 9*07: ; 8@"0/0*H*3"0*<85"H, @": *+*="B: *. /"6788: 62, -07: ; "

?D*H@W-D"8*, H7: V"[KK(b#(KK\g"4": 73": *42". / , V"

S*: "Z: -"0*E6*8/"E*8: *@11*"62A7, -8; V"a7: 23"H*5797, -="B: **3*423"

8*: 6?H1-B7: ; "0"*8: 62<A2<"8-: ?7e--="80@971**8** . i 2H-121-23"\$26371--"- "

: 75"H7, 22V"S*: ": *+H7"0*91-572: "627, ; 1**E62H2, 211 /<"Z, 2321: "H*026-@V"M"

0*: ": 75"+*0*6-: ="B: *, -B1/2"*: 1*A21-@"(8@H23="8D*H-3"0"87?1?": 73"-: 75"

H7, 22V"Q2: V"Q2: ="Z: *E6*. *07, "&, ; e-1. 29"+7, 8: ?5*0": 73"-: 75"H7, 22V"_73-"

E*"82. 2", -B1/2"*: 1*A21-@"12"67. *: 7Y: V"



RH-1"E6-326", -B1/D"*: 1*A21-<"-", -B1*+**": 1*A21-@"H6?+"5"

H6?+?="



%2<+71?="E*HH264-07@0*:"Z:?"62<+71*085?Y":21H21e-Y"-857:;"
H*+*0*6211*8:-\S*56?+%2<+717". /, -"6791/2", YH-="1*0*:"2", YH-="5*:*6/2"8/+67, -"62A7YW?Y"6*, ;"0"E6*H0-421--"5"H*+*0*6211*8:@3"X"
Z: *[E*8*, "I 425\") Z:, *5="Z: *[: *+H7A1-<"97:23"8*02:1-5"E*"
17e-*17, ;1*<". 29*E781*8:-\ " *, -1"L7?Z, ,="Z: *="E624H2"082+*="[: *+H7A1-<"+*882562:76;\I 4*6H4"^\` ? , ;e"X"Z: -, YH-="0*:"*42"
0*8E6-1-37, -"0"575*<C: *"3262"-D"[_` MC____%":1*A21-@\, -B1*V"m*"28: ;"



0741*8: -, -B1/D": 1*A21-<="1*"17"*H1-D", -B1/D": 1*A21-@D="5*12B1*="

H7, 25*"12"?2H2A;V"S*:=B: *"@". /"D*: 2, "0"975, YB21-2": *+*: 000-0. 4(=) (B71) -0. 2i . 1. "92":