

DRAFT

- (1) Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:
 - (A) apply mathematics to problems arising in everyday life, society, and the workplace;
 - (B) use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution;
 - (C) select tools, including real objects, manipulatives, paper/pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems;
 - (D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate;
 - (E) create and use representations to organize, record, and communicate mathematical ideas;
 - (F) analyze mathematical relationships to connect and communicate mathematical ideas; and
 - (G) display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.
- (2) Number and Operations. The student applies mathematical process standards to represent and use rational numbers in a variety of forms. The student is expected to:
 - (A) classify whole numbers, integers, and rational numbers using a visual representation such as a Venn diagram to describe relationships between sets of numbers;
 - (B) identify a number, its opposite, and its absolute value;
 - (C) locate, compare, and order integers using a number line;
 - (D) locate, compare, and order rational numbers using a number line;
 - (E) order a set of rational numbers arising from mathematical and real-world contexts; and
 - (F) extend representations for division to include fraction notation such as a/b represents the same number as $a \div b$ where $b \neq 0$.
- (3) Number and Operations. The student applies mathematical process standards to represent addition, subtraction, multiplication, and division while solving problems and justifying solutions. The student is expected to:

- (A) represent division of decimals to the hundredths place using models and connect to an algorithm;
 - (B) use an area model to represent fraction multiplication and decimal multiplication;
 - (C) recognize that dividing by a rational number and multiplying by its reciprocal result in equivalent values;
 - (D) determine whether a quantity is increased or decreased when multiplied by a fraction, including values greater than or less than one with and without computation;
 - (E) represent integer operations with concrete models and connect the actions to algorithms;
 - (F) use previous understanding of all four operations to include whole numbers and positive decimals, fractions, and mixed numbers not having fractions and decimals within the same problem;
 - (G) add, subtract, multiply, and divide integers; and
 - (H) add and subtract positive rational numbers fluently.
- (4) Proportionality. The student applies mathematical process standards to develop an understanding of proportional relationships in problem situations. The student is expected to:
- (A) compare two rules verbally, numerically, graphically, and symbolically in the form of $y = ax$ or $y = x + a$ in order to differentiate between additive and multiplicative relationships;
 - (B) apply qualitative and quantitative reasoning to solve prediction and comparison real-world problems involving ratios and rates;
 - (C) give examples of ratios as multiplicative comparisons of two quantities describing the same attribute;
 - (D) give examples of rates as the comparison by division of two quantities having different attributes, including rates as quotients;
 - (E) represent ratios and percents with concrete models, fractions, and decimals;
 - (F) represent benchmark fractions and percents such as 1%, 10%, 25%, $33\frac{1}{3}\%$, and multiples of these values using 10 x 10 grids, strip diagrams, number lines, and numbers; and
 - (G) generate equivalent forms of fractions, decimals, and percents using real-world problems, including problems that involve money.

- (B) model area formulas for parallelograms, trapezoids, and triangles by decomposing and rearranging parts of these shapes;
 - (C) write equations that represent problems related to the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers; and
 - (D) determine solutions for problems involving the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers.
- (9) Measurement and Data. The student applies mathematical process standards to use coordinate geometry to identify locations on a plane. The student is expected to graph points in all four quadrants using ordered pairs of rational numbers.
- (10) Measurement and Data. The student applies mathematical process standards to use numerical or graphical representations to analyze problems. The student is expected to:
- (A) represent-numeric data graphically, including dot plots, stem-and-leaf plots, histograms, and box plots;
 - (B) use the graphical representation of numeric data to describe the center, spread, and shape of the data distribution;
 - (C) summarize numeric data with numerical summaries, including the mean and median (measures of center) and the range and interquartile range (IQR) (measures of spread) and use these summaries to describe the center, spread, and shape of the data distribution;
 - (D) summarize categorical data with numerical and graphical summaries, including the mode, the percent of values in each category (relative frequency table), and the percent bar graph and use these summaries to describe the data distribution.
- (11) Measurement and Data. The student applies mathematical process standards to use numerical or graphical representations to solve problems. The student is expected to:
- (A) interpret numeric data summarized in dot plots, stem-and-leaf plots, histograms, and box plots; and
 - (B) toC7 (m)-6(.

§111.xx. Grade 7, Beginning with School Year 2013-2014.

*c+ " Kpvtqfwevkqp0"

*3+ " Vjg"fguktg"vq"cejkgxg"gfwevcvkqpcn"gzegngpeg"ku"vjg"ftkxkpi"hqteg"dgjkpf"vjg"Vgzcu"Guugpvkcn"Mpqyngfig"cpf"Umknnu"hqt"ocvjg"ocvkeu."iwkfgf"d{"vjg"Eqnngig"cpf"Ectgg"Tgcfkpguu"Uvcpfctfu0"D{"g"odgffkpi"uvcvkukveu."rtqdcdknkv{"cpf"hkpcpeg."yjkng"hqewukpi"qp"hnwgpe{"cpf"uqnf"wpfgtvcpfkpi."Vgzcu"yknn"ngcf"vjg"yc{"kp"ocvjg"ocvkeu"gfwevcvkqpcpf"rtgrctg"cmn"Vgzcu"uvwfgpvu"hqt"vjg"ejcmngpi"gu"vjg{"yknn"hcge"kp"vjg"43uv"egpvt{0"

*4+ " Vjg"rtqeguu"uvcpfctfu"kpvgitcvgf"cv"gxgt{"itc"fg"ngxgn"cpf"eqwtug0"Yjgp"rquukdng."uvwfgpvu"yknn"crn{"ocvjg"ocvkeu"vq"rtqdn"o"u"ctkukpi"kp"gxgt{fc{"nkhg."uqekgv{"cpf"vjg"yqtmrnceg0"Uvwfgpvu"yknn"wug"c"rtqdn"o"uqnxkpi"o"qfgn"vjcv"kpqtrqtcv"u"cpnc{|kpi"ikxgp"kpqht"ocvkqp."hqt"owncvkpi"c"rncp"qt"uvtcvgi{"fgvgt"okkpi"c"uqnvkqp."lwvkh{kpi"vjg"uqnvkqp."cpf"gxncwvkpi"vjg"rtqdn"o"uqnxkpi"rtqeguu"cpf"vjg"tgcupcdngpguu"qh"vjg"uqnvkqp0"Uvwfgpvu"yknn"ugnev"cr"rtqr"tkcv"vqqu"uwej"cu"tgcn"qdlgevu."ocpkrwncvxgu."rcrgt"cpf"rgpek."cpf"vgejppnqi{"cpf"vgejpkswgu"uwej"cu"ogpvcn"ocvjg."guk"ocvkqp."cpf"pwo"dg"t"ugpug"vq"uqnxg"rtqdn"o"u0"Uvwfgpvu"yknn"ghhgev"vkg"eq"o"wpkecvg"ocvjg"ocvkecn"kf"gc"u."tgcupkpi."cpf"vjg"kt"ko"rnkecvkqpu"wkpi"o"wnvrng"tgrtgupvcvkqpu"uwej"cu"u{"o"dqnu."fkc"itc"ou."itcr"ju."cpf"ncpi"wcig0"Uvwfgpvu"yknn"wug"ocvjg"ocvkecn"tgcncvkqpu"jkr"u"vq"igpgtcvg"uqnvkqpu"cpf"ocmg"eqppgev"qpu"cpf"rtgf"kevqpu0"Uvwfgpvu"yknn"cpnc{|g"ocvjg"ocvkecn"tgcncvkqpu"jkr"u"vq"eqppgev"cpf"eq"o"wpkecvg"ocvjg"ocvkecn"kf"gc"u0"Uvwfgpvu"yknn"fkurnc{"g"zrnckp."qt"lwvkh{"ocvjg"ocvkecn"kf"gc"u"cpf"ctiw"ogpvu"wkpi"rtgekug"ocvjg"ocvkecn"ncpi"wcig"kp"ytkvvp"qt"qtcn"eq"o"wpkecvkqp0"

*5+ " Vjg"rtk"o"ct{"hgecn"rqkpvu"cv"itc"fg"9"ctg"pw"odgt"qrgtcvkqpu="rtqrqtkvqpcnk{"="gzr"tgaukqpu."gswcvkqpu"cpf"tgcncvkqpu"jkr"="cpf"ogcuwtg"ogpv"cpf"fcvc0"Uvwfgpvu"uug"eqpegrvu."cni"qtkvj"o"u."cpf"rtqr"gtvkgu"qh"tcvkqpcn"pw"odgtu"vq"gzrnq"tg"ocvjg"ocvkecn"tgcncvkqpu"jkr"u"vq"fguetkdg"kp"etgcu"kp"i"n{"eq"o"rngz"ukvwcvkqpu0"Uvwfgpvu"uug"eqpegrvu"qh"rtqr"qtkvqpcnk{"vq"gzrnq"tg."fgxgnqr."cpf"eq"o"wpkecvg"ocvjg"ocvkecn"tgcncvkqpu"jkr"u."kpenw"fkpi"pw"odgt."igq"ogvt{"cpf"ogcuwtg"ogpv."cpf"uvcvkukveu"cpf"rtqdcdknkv{"Uvwfgpvu"uug"cn"igdtcke"vj"jpmkpi"vq"fguetkdg"j"q"y"c"ej"cp"ig"kp"qpg"swcpvk{"kp"c"tgcncvkqpu"jkr"tguwnvu"kp"c"ej"cp"ig"kp"vjg"qvjgt="cpf"vjg{"eqppgev"xtgdcn."pw"ogtke."itcr"jke."cpf"u{"o"dqne"tgrtgupvcvkqpu"qh"tgcncvkqpu"jkr"u."kpenw"fkpi"gswcvkqpu"cpf"kp"gswnkvkgu0"Uvwfgpvu"uug"igq"ogvtke"rtqr"gtvkgu"cpf"tgcncvkqpu"jkr"u."cu"ygm"cu"urcvken"tgcupkpi."vq"o"qfgn"cpf"cpnc{|g"ukvwcvkqpu"cpf"uqnxg"rtqdn"o"u0"Uvwfgpvu"eq"o"wpkecvg"kpqht"ocvkqp"cdqvw"igq"ogvtke"hk"i"wtgu"qt"ukvwcvkqpu"d{"swcpvk{kpi"cvtkd"dwgu."igpgtcnk|g"rtqeg"fw"tgu"htq"o"ogcuwtg"ogpv"gzr"tgkgegu."cpf"uug"vjg"rtqeg"fw"tgu"vq"uqnxg"rtqdn"o"u0"Uvwfgpvu"uug"cr"rtqr"tkcv"uvcvkukveu."tgrtgupvcvkqpu"qh"fcvc."cpf"tgcupkpi"vq"ftc"y"eqpenwukqpu."gxncwcvg"ctiw"ogpvu."cpf"ocmg"tgeq"o"ogp"fcvkqpu0"Yjkg"vjg"uug"qh"cmn"v{"rgu"qh"vgejppnqi{"ku"ko"rqtvcpv."vjg"go"r"j"cku"qp"cn"igdtc"tgc"fkpguu"umknnu"pgeguukvcv"gu"vjg"ko"rng"ogpvcvkqp"qh"itcr"j"kp"i"vgejppnqi{0"

*6+ " Uvcvg"ogpvu"vjcv"eqpvckp"vjg"y"qtf"\$kpenw"fkpi"\$tghgtgpeg"eqpvgp"vjcv"o"uwv"dg"ocuvgtgf."yjkng"vjqug"eqpvckkpi"vjg"r"j"tcug"\$uwej"cu"\$ctg"kpvgp"fgf"cu"rquukdng"knwuv"tcvxg"gz"o"rngu0"

*d+ Mpqyngfi"cpf"umknu0

*3+ Ocvjg o cvkecn"Rtqeguu"Uvcpfctfu0"Vjg"uwvfgpv"wugu" o cvjg o cvkecn"rtqeguugu"vq" ceswktg"cpf"fg o qpuvtcvg" o cvjg o cvkecn"wpfgtuvcpfkpi0"Vjg"uwvfgpv"ku"gzrgevfg"vq<

*C+ cr rn{" o cvjg o cvkeu"vq"rtqdnq o u"ctkukpi"kp"gxgt{fc{"nkhg."uqekgv{."cpf"vjg" yqtmrnceg="

*D+ wug"c"rtqdnq o /uqnxkpi" o qfgn"vjcv"kpqtrqtcvqu"cpn{|kpi"ikxgp" kphqt o cvkqp."hqt o wncvki" c"rncp"qt"uvtcvgi{."fgvgt o kpkpi" c"uqnvkqp." lwvkh{kpi"vjg"uqnvkqp."cpf"gxncwcvkpi"vjg"rtqdnq o /uqnxkpi"rtqeguu"cpf"vjg" tgcuaqpcdnpguu"qh"vjg"uqnvkqp="

*E+ ugnge"vqqnu."kpenwfkpi"tgcn"qdlgevu." o cpkrwncvkgu."rcrgt"rgpek."cpf" vgejpnqi{"cu"cr"rtqr"tkcvg."cpf"vgejpkswgu."kpenwfkpi" o gpvcn" o cvj." guvk o cvkqp."cpf"pw o dgt"ugpug"cu"cr"rtqr"tkcvg."vq"uqnxg"rtqdnq o u="

*F+ eq o o wpkecvg" o cvjg o cvkecn"kfkgu."tgcuaqkpi."cpf"vjgkt" k o rncecvkqpu"wukpi" o wnvkrng"tgrtgugpvcvqpu."kpenwfkpi"u{ o dnu."fkcitc o u."itcrju."cpf" ncpicwieg"cu"cr"rtqr"tkcvg="

*G+ etgcvg"cpf"wug"tgrtgugpvcvqpu"vq"qticpk|g."tgeqtf."cpf"eq o o wpkecvg" o cvjg o cvkecn"kfkgu="

*H+ cpcn{|g" o cvjg o cvkecn"tgnvcvqpujkr"vq"eqppge"cpf"eq o o wpkecvg" o cvjg o cvkecn"kfkgu="cpf"

*I+ fkurnc{."gzrnckp."cpf"lwvkh{" o cvjg o cvkecn"kfkgu"cpf"ctiw o gpvu"wukpi" rtgekug" o cvjg o cvkecn"ncpicwieg"kp"ytkvvgp"qt"qtcn"eq o o wpkecvkqp0"

*4+ Pw o dgt"cpf"Qrgtcvqpu0"Vjg"uwvfgpv"crnkgu" o cvjg o cvkecn"rtqeguu"uvcpfctfu"vq" tgrtgugpv"cpf"wug"tcvqpcn"pw o dgtu"kp" c"xctkgv{"qh"ht o u0"Vjg"uwvfgpv"ku"gzrgevfg" vq"gzvpgf"rtgxkwu"mpqyngfi"qh"ugvu"cpf"uwdugvu"wukpi" c"xkuwcn"tgrtgugpvcvqpu" uwej"cu" c"Xgpp" fkcitc o "vq"fguetkdg"tgnvcvqpujkr"dgvyggp"ugvu"qh"tcvqpcn" pw o dgtu0"

*5+ Pw o dgt"cpf"Qrgtcvqpu0"Vjg"uwvfgpv"crnkgu" o cvjg o cvkecn"rtqeguu"uvcpfctfu"vq" cff."uwdvtcev." o wnvkrn{."cpf"fkxkfg"y jkng"uqnxkpi"rtqdnq o u"cpf"lwvkh{kpi" uqnvkqpu0"Vjg"uwvfgpv"ku"gzrgevfg"vq<"

*C+ cff."uwdvtcev." o wnvkrn{."cpf"fkxkfg"kpvgigtu"hnwgpvn{="cpf"

*D+ cr rn{"cpf"gzvpgf"rtgxkwu"wpfgtuvcpfkpi"u"qh"qrgtcvqpu"vq"uqnxg"rtqdnq o u" wukpi"cfkvpq."uwdvtcevqpu." o wnvkrncecvkqp."cpf"fkxkqpu"qh"tcvqpcn" pw o dgtu="

*6+ Rtqrqtvkqpcnk{0"Vjg"uwvfgpv"crnkgu" o cvjg o cvkecn"rtqeguu"uvcpfctfu"vq"tgrtgugpv" cpf"uqnxg"rtqdnq o u"kpqnxkpi"rtqrqtvkqpcn"tgnvcvqpujkr0"Vjg"uwvfgpv"ku"gzrgevfg" vq<"

*C+" tgrtgugpv"eqpuvcpv"tcvgu"qh"ejcpig"kp" o cvjg o cvkecn"cpf"tgcn/yqtnf"
rtqdnq o u"ikxgp"rkevqtkcn."vcdwnct."xgtdcn."pw o gtke."iterjkecn."cpf"cnigdtcke"
tgrtgugpvcvkqpu."kpenwfkpi" G ?="U W

*D+" ecnewncvg"wpkv"tcvgu"htq o "tcvgu"kp" o cvjg o cvkecn"cpf"tgcn/yqtnf"rtqdnq o u="

E+" fgvgto kpg"vjg"eqpuvcpv"qh"rtqrqtvkqpcnk{ " N ?" ykvj"kp" o cvjg o cvkecn"
cpf"tgcn/yqtnf"rtqdnq o u="

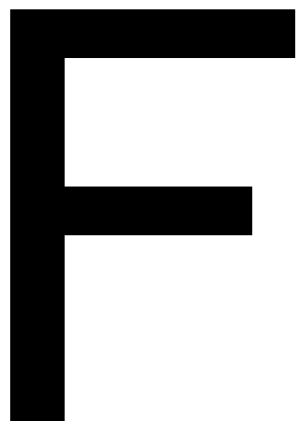
*F+" uqnxg"tgcn/yqtnf"rtqdnq o u"vq"hkpf"vjg"yjqng"ikxgp"c"rctv"cpf"vjg"rgtegpv."
vq"hkpf"vjg"rctv"ikxgp"vjg"yjqng"cpf"vjg"rgtegpv."cpf"vq"hkpf"vjg"rgtegpv"
ikxgp"vjg"rctv"cpf"vjg"yjqng="

*G+" uqnxg"rtqdnq o u"kpqxnxkpi"tcvqu."tcvgu."cpf"rgtegpv."kpenwfkpi" o wnvkuvgr"
rtqdnq o u"kpqxnxkpi"rgtegpv"kpetgcug"cpf"rgtegpv"fgetgcug."kpenwfkpi"
hkpcpeken"nkvgtce{ "rtqdnq o u"uwej"cu"vcz."vkr."fkueqwpv."uk o rng"kpvgtguv."cpf"
eq o o kuukqp="

*H+" eqpxgtv"wpkv"ykvj"kp"c" o gcuwtg o gpv"u{ uvgo ."kpenwfkpi"vjg"wug"qh"
rtqrqtvkqpu"cpf"wpkv"tcvgu="cpf"

*I+" eqpxgtv"dgvyggp" o gcuwtg o gpv"u{ uvgo u."kpenwfkpi"vjg"wug"qh"rtqrqtvkqpu"
cpf"vjg"wug"qh"wpkv"tcvgu0"

*7+" I gq o gvt{"cpf"O gcuwtg o gpv0
c



- *C+" o cmg"rtgfkevkqpu"cpf"fgvgt o kpg"uqnwvkqpu"wukpi"gzrgtk o gpvcn"fcvc"hqt" uk o rng"cpf"eq o rqpwf"gxgpvu="cpf"
- *D+" o cmg"rtgfkevkqpu"cpf"fgvgt o kpg"uqnwvkqpu"wukpi"vjgqgtgvekn"rtqdcdknv {"hqt" uk o rng"cpf"eq o rqpwf"gxgpvu0"
- *;+" Uvcvkukveu"cpf"Rtqdcdknv {0"Vjg"uvwfgpv"cr rnkgu" o cvjg o cvkecn"rtqeguu"uvcpfctfu"vq" hkp f"uqnwvkqpu"kp"rtqdcdknv {"cpf"uvcvkukveu0"Vjg"uvwfgpv"ku"gzrgev f"vq<"
- *C+" hkp f"vjg"rtqdcdknvkgu"qh" c"uk o rng"gxgpv"cpf"kvu"eq o rng o gpv"cpf"fguetkdg" vjg"tgncvkqpujkr"dgvyggp"vjg"v y q="
- *D+" wug"fcvc"htq o "c"tcpfq o "uc o rng"vq" o cmg"kphgtgpegu"cdqww" c"rqrwncvkqp="
- *E+" uqnxg"rtqdn g o u"wukpi" fcvc"tgrtgugpv"kp"det" i tcr ju."fqv"rnqvu."cpf"ekteng" i tcr ju."kpenwfkpi" rctv/vq/ y j qng"cpf" rctv/vq/ rctv"eq o rctkuqpu"cpf" gswkxcngpvu="
- *F+" uqnxg"rtqdn g o u"wukpi"swcnkvckxg"cpf"swcpvkvcxg"rtgfkevkqpu"cpf" eq o rctkuqpu"htq o "uk o rng"gzrgtk o gpvu="cpf"
- *G+" fgvgt o kpg"gzrgtk o gpvcn"cpf"vjgqgtgvekn"rtqdcdknvkgu"tgncv f"vq"uk o rng"cpf" eq o rqpwf"gxgpvu"wukpi" fcvc"cpf"uc o rng"urcegu0"
- *;+" Gzrtguukqpu."Gswvkqpu."cpf"tgncvkqpujkr u0"Vjg"uvwfgpv"cr rnkgu" o cvjg o cvkecn" rtqeguu"uvcpfctfu"vq"tgrtgugpv"nkpgct"tgncvkqpujkr u"wukpi" o wnvkrng"tgrtgugpvckvqpu0" Vjg"uvwfgpv"ku"gzrgev f"vq"tgrtgugpv"nkpgct"tgncvkqpujkr u"wukpi" xgtdcn"fguetkrvkqpu." vcdngu." i tcr ju."cpf"gswevkqpu"vjcv"uk o rnhk {"vq"vjg"htq o " \ ?" P [-" E
- *32+" Gzrtguukqpu."Gswvkqpu."cpf"tgncvkqpujkr u0"Vjg"uvwfgpv"cr rnkgu" o cvjg o cvkecn" rtqeguu"uvcpfctfu"vq"fgxgnqr" i gq o gvtke"tgncvkqpujkr u" ykvj" xqnw o gl"Vjg"uvwfgpv"ku" gzrgev f"vq<"
- *C+" o qfgn"vjg"tgncvkqpujkr"dgvyggp"vjg"xqnw o g"qh" c"tgevcp i wnct"rtku o "cpf" c" tgevcp i wnct"r {tc o kf"jcxkpi"dqvj"eqp i twgpv"dcugu"cpf"jgk i jvu"cpf"eqppgev" vjcv"tgncvkqpujkr"vq"vjg"htq o wncu="
- *D+" gzrnckp"xgtdcnn {"cpf"u { o dqncecn {"vjg"tgncvkqpujkr"dgvyggp"vjg"xqnw o g"qh" c"vtkepi wnct"rtku o "cpf" c"vtkepi wnct"r {tc o kf"jcxkpi"dqvj"eqp i twgpv"dcugu" cpf"jgk i jvu"cpf"eqppgev"vjcv"tgncvkqpujkr"vq"vjg"htq o wncu="cpf"
- *E+" wug" o qfgnu"vq"fgvgt o kpg"vjg"cr rrtqzk o cvg"htq o wncu"htq"vjg"ektew o hgtgpeg" cpf"ctgc"qh" c"ekteng"cpf"eqppgev"vjg" o qfgnu"vq"vjg"cevwc n"htq o wncu0"
- *33+" Gzrtguukqpu."Gswvkqpu."cpf"tgncvkqpujkr u0"Vjg"uvwfgpv"cr rnkgu" o cvjg o cvkecn" rtqeguu"uvcpfctfu"vq"uqnxg" i gq o gvtke"rtqdn g o u0"Vjg"uvwfgpv"ku"gzrgev f"vq<"
- *C+" uqnxg"rtqdn g o u"kpqxnxkpi"vjg"xqnw o g"qh"tgevcp i wnct"rtku o u."vtkepi wnct" rtku o u."tgevcp i wnct"r {tc o kfu."cpf"vtkepi wnct"r {tc o kfu="
- *D+" fgvgt o kpg"vjg"ektew o hgtgpeg"cpf"ctgc"qh"ektengu="

*E+ "fgvgtokpg"vjg"ctgc"qh"eqorqukvghkiwtgu"

§111.xx. Grade 8, Beginning with School Year 2013-2014.

*c+" Kpvtqfwevkqp0"

*3+" Vjg"fguktg"vq"cejkgxg"gfwevcvkqpcn"gzegngpeg"ku"vjg"ftkxkpi"hqteg"dgj kpf"vjg"Vgzcu"Guugpvkcn"Mpqyngfig"cpf"Umknu"hqt"ocvjgocvkeu."iwkfgf"d{"vjg"Eqnngig"cpf"Ectgg"Tgcfkpguu"Uvcpfctfu0"D{"g"odgffkpi"uvcvkuvkeu."rtqdcdknk{"cpf"hkpcpeg."yjkng"hqewukpi"qp"hnwgpe{"cpf"uqnf"wpfgtuvcpfkpi."Vgzcu"yknn"ngcf"vjg"yc{"kp"ocvjgocvkeu"gfwevcvkqpcpf"rtgrctg"cm"Vgzcu"uvwfgpvu"hqt"vjg"ejcmngpi"gu"vjg{"yknn"hcge"kp"vjg"43uv"egpvwt{0"

*4+" Vjg"rtqeguu"uvcpfctfu"ctg"kpvgitcvgf"cv"gxgt{"itcfig"ngxgn"cpf"eqwtug0"Yjgp"rquukdng."uvwfgpvu"yknn"crn{"ocvjgocvkeu"vq"rtqdn"ou"ctkukpi"kp"gxgt{fc{"nkhg."uqekgv{"cpf"vjg"yqtmrnceg0"Uvwfgpvu"yknn"wug"c"rtqdn"ou/uqnxkpi"oqfg"vjcv"kpqrqtvcvu"cpn{|kpi"ikxgp"kphqt"ocvkqp."hqt"owncvki"c"rncp"qt"uvtcvgi{"fgvgt"okkpi"c"uqnwvkqp."lwvkh{kpi"vjg"uqnwvkqp."cpf"gxcnwvkpi"vjg"rtqdn"ou/uqnxkpi"rtqeguu0"Uvwfgpvu"yknn"uggev"cr"rtqr"tkcv"vqqu."uwej"cu"tgcn"qdlgevu."ocpkrwncvkgu."rcrgt"cpf"rgpek."cpf"vgejpnqi{"qt"vgejpkswgu."uwej"cu"ogpvcn"ocvjg."guk"ocvkqp."cpf"pw"odgt"ugpug."vq"uqnxg"rtqdn"ou0"Eq"o"wpkecvkqp"qh"ocvjgocvkecn"kf"gc."tgcupkpi."cpf"vjgkt"ko"rnkecvkqpu"wukpi"u{odqnu."fkcit"ou."itcrju."cpf"ncpiwcig"yknn"dg"gorj"ck|gf0"Uvwfgpvu"yknn"etgcv"cpf"wug"tgrtgugpvkqpu"vq"qti"cpk|g."tgeqtf."cpf"eq"o"wpkecvg"ocvjgocvkecn"kf"gc"0"Uvwfgpvu"yknn"gzrnckp."fkurnc{"qt"lwvkh{"ocvjgocvkecn"kf"gc"cpf"cti"wo"gpvu"wukpi"rtgekug"ocvjgocvkecn"ncpiwcig"kp"ytkv"gp"qt"qtcn"eq"o"wpkecvkqp0"

*5+" Vjg"rtk"o"ct{"hgecn"rqkpvu"cv" I tcf g": "ctg"rtqrqtvkqpcnk{"="gzrtguukqpu."gswcvkqpu."tgcncvqpu"jkru."cpf"hwqpfvcvqpu"qh"hwpevkqpu="cpf"ogcuwtg"ogpv"cpf"fcvc0"Uvwfgpvu"uwg"eqpegrvu."cniqtkvj"ou."cpf"rtqr"gtvkgu"qh"tgcn"pw"odgtu"vq"gzrnqtg"ocvjgocvkecn"tgcncvqpu"jkru"cpf"vq"fguetkdg"kp"etgcukpin{"eq"orngz"ukvwcvkqpu0"Uvwfgpvu"uwg"eqpegrvu"qh"rtqr"qtvkqpcnk{"vq"gzrnqtg."fgxgnqr."cpf"geqtf.nkv? es v"hnkv? ` \$ k kk Sv" nkg vgc# ctO pf"hq c s

*3+

*E+ wug"cp"cnigdtcke"tgrtgugpvcvkqp"vq"gzrnckp"vjg"ghhgev"qh"i"ixgp"rqukvkg"
tcvkqpcn"uecng"hcevqt"cr rnkgt"vq"vyq/fk o gpukqpcn"hk i wtgu"qp"ceqqtfkpcvg"
rncpg"ykvj"vjg"qtkikp"cu"vjg"egpvg"qh"fkncvkqp"uwej"cu"* [" " "207 ["207 "0"

*6+ Rtqrqtvkqpcnkv{0"Vjg"uvwfgpv"cr rnkgu" o cvjg o cvkecn"rtqeguu"uvcpfctfu"vq"gzrnckp"
rtqrqtvkqpcn"cpf"pqp/rtqrqtvkqpcn"tgncvkqpujkr"u"kpqxqkxi"unqrg0"Vjg"uvwfgpv"ku"
gzrgev"vq<"

*C+ wug"uk o knct"tkijv"vtkepingu"vq"fgxgnqr"cp"wpfgtuvcpfkpi"vjcv"unqrg." P"ixgp"
cu"vjg"tevg"eq o rctkpi"vjg"ejcpi"gp" \xcnwg"vq"vjg"ejcpi"gp" [xcnwg."* \4/
 \3+1* \4/" \3+. "ku"vjg"uc o g"ht"cp{"vyq"rqkpvu"* \3." \3+"cpf"* \4." \4+"qp"vjg"uc o g"
nkpg="cpf"

*D+ [

*C+" fguetkdg"vjg"xqmw o g"hqt o wnc" 9 %qhk"e{nkpfgt"kp"vgt o u"qh"kvu"dcug"ctgc"
cpf"kvøu"jgkijv="

*D+" o qf gn"vjg"tgncvkqpujkr"dgvyggp"vjg"xqmw o g"qh"ce{nkpfgt"cpf"ceqpg"
jcxkpi"dqvj"eqpigtwgpv"dcugu"cpf"jgkijvu"cpf"eqppgev"vjcv"tgncvkqpujkr"vq"
vjg"hqt o wncu="cpf"

*E+" wug" o qfgnu"cpf"fkci tco u"vq"gzrnckp"vjg"R{vjciqtgcp"vjgqto0"

*9+" Gzrtguukqpu."Gswcvkqpu."cpf"tgncvkqpujkr"Vjg"uvwfgpv"crnkgu"ocvjgocvkecn"
rtqeguu"uvcpfctfu"vq"wug"igqogvt{"vq"uqnxg"rtqdng o u0"Vjg"uvwfgpv"ku"gzrgevfg"vq<"

*C+" uqnxg-rtqdng o u"kpqnxkpi g o cvkecn"# w i+ cO

_r n"

*D+ fkhgtgpkcvg"dgvyggp"vtcpuhqt o cvkqpu"vjcv"rtgugtxg"eqpi twgpeg"cpf"vj qug"
vjcv"fq"pqv="

*E+ gzrnckp"vjg"ghhgev"qh"vtcpuncvkqpu."tghngevkqpu"qxgt"vjg" ["qt" \czku."cpf"
tqvcvkqpu"nk okvgf"vq";2Å."3:2Å."492Å."cpf"582Å"cu"cr rnkgef"vq"vyq/
fk o gpukqpen"ujcrgu"qp"q"eqqf kpcvg"rncpg"wukpi"cp"cn i gdtcke"
tgrtgugpvcvkqp."uwej"cu"* ["\t * ["-4." \ -"4+="cpf"

*F+