

# Lesson Correlation to the Grade 6 Texas Essential Knowledge and Skills

This worktext is customized to the *Texas Essential Knowledge and Skills* and will help you prepare for the *State of Texas Assessments of Academic Readiness (STAAR®)* in Mathematics for Grade 6.

Mathematical process standards are not listed under separate lessons. Because application of mathematical process standards is part of each knowledge statement, these standards are incorporated into instruction and practice throughout the lessons.

Texas Essential Knowledge and Skills	Measuring Up Lessons
<b>TEKS 6.2 Number and operations.</b> The student applies mathematical process standards to represent and use rational numbers in a variety of forms.	
(A) classify whole numbers, integers, and rational numbers using a visual representation such as a Venn diagram to describe relationships between sets of numbers	1
(B) identify a number, its opposite, and its absolute value	2
(C) locate, compare, and order integers and rational numbers using a number line	2, 4
(D) order a set of rational numbers arising from mathematical and real-world contexts	2, 4
(E) 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
<b>TEKS 6.3 Number and operations.</b> The student applies mathematical process standards to represent addition, subtraction, multiplication, and division while solving problems and justifying solutions.	
(A) recognize that dividing by a rational number and multiplying by its reciprocal result in equivalent values	6
(B) determine, with and without computation, whether a quantity is increased or decreased when multiplied by a fraction, including values greater than or less than one	5
(C) represent integer operations with concrete models and connect the actions with the models to standardized algorithms	8
(D) add, subtract, multiply, and divide integers fluently	8
(E) multiply and divide positive rational numbers fluently	5, 6, 9, 10
<b>TEKS 6.4 Proportionality.</b> The student applies mathematical process standards to develop an understanding of proportional relationships in problem situations.	
(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	11
(B) apply qualitative and quantitative reasoning to solve prediction and comparison of real-world problems involving ratios and rates	14, 15
(C) give examples of ratios as multiplicative comparisons of two quantities describing the same attribute	12
(D) give examples of rates as the comparison by division of two quantities having different attributes, including rates as quotients	13
(E) represent ratios and percents with concrete models, fractions, and decimals	12, 17
(F) represent benchmark fractions and percents such as 1%, 10%, 25%, $33\frac{1}{3}\%$ , and multiples of these values using 10 by 10 grids, strip diagrams, number lines, and numbers	16
(G) generate equivalent forms of fractions, decimals, and percents using real-world problems, including problems that involve money	18
(H) convert units within a measurement system, including the use of proportions and unit rates	19, 20
<b>TEKS 6.5 Proportionality.</b> The student applies mathematical process standards to solve problems involving proportional relationships.	
(A) represent mathematical and real-world problems involving ratios and rates using scale factors, tables, graphs, and proportions	11, 14, 15
(B) solve real-world problems to find the whole given a part and the percent, to find the part given the whole and the percent, and to find the percent given the part and the whole, including the use of concrete and pictorial models	21, 22
(C) use equivalent fractions, decimals, and percents to show equal parts of the same whole	18



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<b>TEKS 6.6 Expressions, equations, and relationships.</b> The student applies mathematical process standards to use multiple representations to describe algebraic relationships.	
(A) identify independent and dependent quantities from tables and graphs	23, 24
(B) write an equation that represents the relationship between independent and dependent quantities from a table	23
(C) represent a given situation using verbal descriptions, tables, graphs, and equations in the form $y = kx$ or $y = x + b$	24
<b>TEKS 6.7 Expressions, equations, and relationships.</b> The student applies mathematical process standards to develop concepts of expressions and equations.	
(A) generate equivalent numerical expressions using order of operations, including whole number exponents and prime factorization	25
(B) distinguish between expressions and equations verbally, numerically, and algebraically	28
(C) determine if two expressions are equivalent using concrete models, pictorial models, and algebraic representations	25, 29
(D) generate equivalent expressions using the properties of operations: inverse, identity, commutative, associative, and distributive properties	26, 27
<b>TEKS 6.8 Expressions, equations, and relationships.</b> The student applies mathematical process standards to use geometry to represent relationships and solve problems.	
(A) extend previous knowledge of triangles and their properties to include the sum of angles of a triangle, the relationship between the lengths of sides and measures of angles in a triangle, and determining when three lengths form a triangle	29
(B) model area formulas for parallelograms, trapezoids, and triangles by decomposing and rearranging parts of these shapes	30, 31, 32
(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	30, 31, 32, 33
(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	30, 31, 32, 33
<b>TEKS 6.9 Expressions, equations, and relationships.</b> The student applies mathematical process standards to use equations and inequalities to represent situations.	
(A) write one-variable, one-step equations and inequalities to represent constraints or conditions within problems	36, 37
(B) represent solutions for one-variable, one-step equations and inequalities on number lines	34, 35
(C) write corresponding real-world problems given one-variable, one-step equations or inequalities	36, 37
<b>TEKS 6.10 Expressions, equations, and relationships.</b> The student applies mathematical process standards to use equations and inequalities to solve problems.	
(A) model and solve one-variable, one-step equations and inequalities that represent problems, including geometric concepts	34, 35, 36, 37
(B) determine if the given value(s) make(s) one-variable, one-step equations or inequalities true	34, 35
<b>TEKS 6.11 Measurement and data.</b> The student applies mathematical process standards to use coordinate geometry to identify locations on a plane.	
(A) graph points in all four quadrants using ordered pairs of rational numbers	38
<b>TEKS 6.12 Measurement and data.</b> The student applies mathematical process standards to use numerical or graphical representations to analyze problems.	
(A) represent numeric data graphically, including dot plots, stem-and-leaf plots, histograms, and box plots	39, 40, 41, 43
(B) use the graphical representation of numeric data to describe the center, spread, and shape of the data distribution	42
(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	42

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(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	44
<b>TEKS 6.13 Measurement and data.</b> The student applies mathematical process standards to use numerical or graphical representations to solve problems.	
(A) interpret numeric data summarized in dot plots, stem-and-leaf plots, histograms, and box plots	39, 40, 41, 43
(B) distinguish between situations that yield data with and without variability	42
<b>TEKS 6.14 Personal financial literacy.</b> The student applies mathematical process standards to develop an economic way of thinking and problem solving useful in one's life as a knowledgeable consumer and investor.	
(A) compare the features and costs of a checking account and a debit card offered by different local financial institutions	45
(B) distinguish between debit cards and credit cards	45
(C) balance a check register that includes deposits, withdrawals, and transfers	46
(E) describe the information in a credit report and how long it is retained	47
(F) describe the value of credit reports to borrowers and to lenders	47
(G) explain various methods to pay for college, including through savings, grants, scholarships, student loans, and work-study	48
(H) compare the annual salary of several occupations requiring various levels of post-secondary education or vocational training and calculate the effects of the different annual salaries on lifetime income	49