



Teacher Learning Report Grade 6 Math

Representation and Comparison of Rational Numbers

6.2 Number and operations. The student applies mathematical process standards to represent and use rational numbers in a variety of forms.

Unit	CHECKPOINT		
	1	2	3

Process (Tools to Know)

6.1(A) apply math in everyday situations ⑧
6.1(B) use problem-solving models ⑧ *connected 6.1(C)*

Unit	CHECKPOINT		
	1	2	3

Content

Representation of Rational Numbers

6.2(A) classify whole numbers, integers, and rational numbers using a visual representation such as a Venn diagram to describe relationships between sets of numbers

Unit	CHECKPOINT		
	1	2	3

Comparison of Rational Numbers

6.2(D) order a set of rational numbers arising from mathematical and real-world contexts ⑧

6.2(C) locate, compare, and order integers and rational numbers using a number line

Process (Ways to Show)

6.1(E) create representations
6.1(F) analyze information ⑧ *connected 6.1(D), 6.1(G)*

Unit	CHECKPOINT		
	1	2	3



Teacher Learning Report Grade 6 Math

All Operations with Rational Numbers

6.3 Number and operations. The student applies mathematical process standards to represent addition, subtraction, multiplication, and division while solving problems and justifying the solutions.

Connected Knowledge and Skills 6.2

Unit	CHECKPOINT		
	1	2	3

Process (Tools to Know)

6.1(A) apply math in everyday situations ⑧
6.1(B) use problem-solving models ⑧

connected 6.1(C)

Unit	CHECKPOINT		
	1	2	3

Content

Multiplication and Division with Positive Rational Numbers

6.3(E) multiply and divide positive rational numbers fluently

6.2(E) extend representations for division to include fraction notation such as a/b represents the same number as $a \div b$ where $b \neq 0$

6.3(A) recognize that dividing by a rational number and multiplying by its reciprocal result in equivalent values

6.3(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

Unit	CHECKPOINT		
	1	2	3

All Operations with Integers

6.3(D) add, subtract, multiply, and divide integers fluently

6.2(B) identify a number, its opposite, and its absolute value

6.3(C) represent integer operations with concrete models and connect the actions with the models to standardized algorithms

Process (Ways to Show)

6.1(E) create representations
6.1(F) analyze information ⑧

connected 6.1(D), 6.1(G)

Unit	CHECKPOINT		
	1	2	3



Teacher Learning Report Grade 6 Math

>> Proportional Reasoning

- 6.4 Proportionality.** The student applies mathematical process standards to develop an understanding of proportional relationships in problem situations.
- 6.5 Proportionality.** The student applies mathematical process standards to solve problems involving proportional relationships.

Unit	CHECKPOINT		
	1	2	3

Process (Tools to Know)

- 6.1(A) apply math in everyday situations ⑧
- 6.1(B) use problem-solving models ⑧ *connected 6.1(C)*

Unit	CHECKPOINT		
	1	2	3

Content

Fractions/Decimals/Percents

- 6.4(G) generate equivalent forms of fractions, decimals, and percents using real-world problems, including problems that involve money ⑧
- 6.5(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 ⑧
- 6.4(E) represent ratios and percents with concrete models, fractions, and decimals
- 6.4(F) represent benchmark fractions and percents such as 1%, 10%, 25%, 33 1/3%, and multiples of these values using 10 by 10 grids, strip diagrams, number lines, and numbers
- 6.5(C) use equivalent fractions, decimals, and percents to show equal parts of the same whole

Unit	CHECKPOINT		
	1	2	3

Ratios/Rates

- 6.4(B) apply qualitative and quantitative reasoning to solve prediction and comparison of real-world problems involving ratios and rates ⑧
- 6.4(C) give examples of ratios as multiplicative comparisons of two quantities describing the same attribute
- 6.4(D) give examples of rates as the comparison by division of two quantities having different attributes, including rates as quotients
- 6.5(A) represent mathematical and real-world problems involving ratios and rates using scale factors, tables, graphs, and proportions ⑧

--	--	--	--

Conversions

- 6.4(H) convert units within a measurement system, including the use of proportions and unit rates

--	--	--	--

Process (Ways to Show)

Unit	CHECKPOINT		
	1	2	3



Teacher Learning Report Grade 6 Math

6.1(E) create representations
6.1(F) analyze information [Ⓢ]

connected 6.1(D), 6.1(G)

--	--	--	--

>> *TEKS clusters typically requiring additional time and focus in the curriculum*



Teacher Learning Report Grade 6 Math

>> Expressions, Equations, and Inequalities

- 6.7 Expressions, equations, and relationships.** The student applies mathematical process standards to develop concepts of expressions and equations.
- 6.9 Expressions, equations, and relationships.** The student applies mathematical process standards to use equations and inequalities to represent situations.
- 6.10 Expressions, equations, and relationships.** The student applies mathematical process standards to use equations and inequalities to solve problems.

Unit	CHECKPOINT		
	1	2	3

Process (Tools to Know)

- 6.1(A) apply math in everyday situations [Ⓢ]
- 6.1(B) use problem-solving models [Ⓢ] *connected 6.1(C)*

Unit	CHECKPOINT		
	1	2	3

Content

Order of Operations

- 6.7(A) generate equivalent numerical expressions using order of operations, including whole number exponents, and prime factorization
- 6.7(D) generate equivalent expressions using the properties of operations: inverse, identity, commutative, associative, and distributive properties
- 6.7(B) distinguish between expressions and equations verbally, numerically, and algebraically
- 6.7(C) determine if two expressions are equivalent using concrete models, pictorial models, and algebraic representations

Unit	CHECKPOINT		
	1	2	3

Representation and Solutions of Equations/Inequalities

- 6.10(A) model and solve one-variable, one-step equations and inequalities that represent problems, including geometric concepts [Ⓢ]
- 6.9(A) write one-variable, one-step equations and inequalities to represent constraints or conditions within problems
- 6.9(B) represent solutions for one-variable, one-step equations and inequalities on number lines
- 6.9(C) write corresponding real-world problems given one-variable, one-step equations or inequalities
- 6.10(B) determine if the given value(s) make(s) one-variable, one-step equations or inequalities true

Process (Ways to Show)

- 6.1(E) create representations
- 6.1(F) analyze information [Ⓢ] *connected 6.1(D), 6.1(G)*

Unit	CHECKPOINT		
	1	2	3



CATHOLIC SCHOOLS
— ARCHDIOCESE OF SAN ANTONIO —

Teacher Learning Report Grade 6 Math

>> *TEKS clusters typically requiring additional time and focus in the curriculum*



Teacher Learning Report Grade 6 Math

Algebraic Representations

6.6 Expressions, equations, and relationships. The student applies mathematical process standards to use multiple representations to describe algebraic relationships.

6.11 Measurement and data. The student applies mathematical process standards to use coordinate geometry to identify locations on a plane.

Connected Knowledge and Skills 6.4

Unit	CHECKPOINT		
	1	2	3

Process (Tools to Know)

6.1(A) apply math in everyday situations ⑧

6.1(B) use problem-solving models ⑧

connected 6.1(C)

Unit	CHECKPOINT		
	1	2	3

Content

Coordinate Planes

6.11(A) graph points in all four quadrants using ordered pairs of rational number

Unit	CHECKPOINT		
	1	2	3

Linear Representations

6.6(C) represent a given situation using verbal descriptions, tables, graphs, and equations in the form $y = kx$ or $y = x + b$ ⑧

6.4(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

6.6(A) identify independent and dependent quantities from tables and graphs

6.6(B) write an equation that represents the relationship between independent and dependent quantities from a table

Unit	CHECKPOINT		
	1	2	3

Process (Ways to Show)

6.1(E) create representations

6.1(F) analyze information ⑧

connected 6.1(D), 6.1(G)

Unit	CHECKPOINT		
	1	2	3



Teacher Learning Report Grade 6 Math

Geometry and Measurement

6.8 Expressions, equations, and relationships. The student applies mathematical process standards to use geometry to represent relationships and solve problems.

Connected Knowledge and Skills 6.4

Unit	CHECKPOINT		
	1	2	3

Process (Tools to Know)

6.1(A) apply math in everyday situations ⑧
6.1(B) use problem-solving models ⑧

connected 6.1(C)

Unit	CHECKPOINT		
	1	2	3

Content

Conversions

6.4(H) convert units within a measurement system, including the use of proportions and unit rates

Data included in
"Proportional Reasoning"

Unit	CHECKPOINT		
	1	2	3

Triangles

6.8(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

Area/Volume

6.8(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 ⑧

6.8(B) model area formulas for parallelograms, trapezoids, and triangles by decomposing and rearranging parts of these shapes

6.8(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 ⑧

Process (Ways to Show)

6.1(E) create representations
6.1(F) analyze information ⑧

connected 6.1(D), 6.1(G)

Unit	CHECKPOINT		
	1	2	3



Teacher Learning Report Grade 6 Math

>> Data Analysis

- 6.12 Measurement and data.** The student applies mathematical process standards to use numerical or graphical representations to analyze problems.
- 6.13 Measurement and data.** The student applies mathematical process standards to use numerical or graphical representations to solve problems.

Unit	CHECKPOINT		
	1	2	3

Process (Tools to Know)

- 6.1(A) apply math in everyday situations ⑧
- 6.1(B) use problem-solving models ⑧ *connected 6.1(C)*

Unit	CHECKPOINT		
	1	2	3

Content

Representation/Interpretation of Data

- 6.13(A) interpret numeric data summarized in dot plots, stem-and-leaf plots, histograms, and box plots
- 6.12(A) represent numeric data graphically, including dot plots, stem-and-leaf plots, histograms, and box plots ⑧
- 6.13(B) distinguish between situations that yield data with and without variability

Unit	CHECKPOINT		
	1	2	3

Measures of Data

- 6.12(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
- 6.12(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
- 6.12(B) use the graphical representation of numeric data to describe the center, spread, and shape of the data distribution

Process (Ways to Show)

- 6.1(E) create representations
- 6.1(F) analyze information ⑧ *connected 6.1(D), 6.1(G)*

Unit	CHECKPOINT		
	1	2	3

>> TEKS clusters typically requiring additional time and focus in the curriculum



Teacher Learning Report Grade 6 Math

Personal Financial Literacy

6.14 Personal financial literacy. 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.

Unit	CHECKPOINT		
	1	2	3

Process (Tools to Know)

6.1(A) apply math in everyday situations [Ⓢ]
6.1(B) use problem-solving models [Ⓢ] *connected 6.1(C)*

Unit	CHECKPOINT		
	1	2	3

Content

Banking

6.14(A) compare the features and costs of a checking account and a debit card offered by different local financial institutions

6.14(B) distinguish between debit cards and credit cards

6.14(C) balance a check register that includes deposits, withdrawals, and transfers

Unit	CHECKPOINT		
	1	2	3

Credit

6.14(E) describe the information in a credit report and how long it is retained

6.14(F) describe the value of credit reports to borrowers and to lenders

6.14(D) explain why it is important to establish a positive credit history

Post-Secondary Education Planning

6.14(G) explain various methods to pay for college, including through savings, grants, scholarships, student loans, and work-study

6.14(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

Process (Ways to Show)

6.1(E) create representations
6.1(F) analyze information [Ⓢ] *connected 6.1(D), 6.1(G)*

Unit	CHECKPOINT		
	1	2	3



Teacher Learning Report Grade 6 Math

PROCESS STANDARDS: MATHEMATICAL PROCESS STANDARDS		Unit	CHECKPOINT		
			1	2	3
6.1	The student uses mathematical processes to acquire and demonstrate mathematical understanding.	Tools to Know			
		Ways to Show			

TOOLS TO KNOW		Unit	CHECKPOINT		
			1	2	3
6.1(A)	apply mathematics to problems arising in everyday life, society, and the workplace [Ⓢ]				
6.1(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 [Ⓢ]				
6.1(C)	select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems				

WAYS TO SHOW		Unit	CHECKPOINT		
6.1(D)	communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate				
6.1(E)	create and use representations to organize, record, and communicate mathematical ideas				
6.1(F)	analyze mathematical relationships to connect and communicate mathematical ideas [Ⓢ]				
6.1(G)	display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication				