CATHOLIC SCHOOLS
ARCHDIOCESE OF SAN ANTONIO

Teacher Learning Report
Grade 7 Math

Rational Number Representations and Operations	Unit	CHECKPOINT 1	2	3
7.2 Number and operations. The student applies mathematical process standards to represent and use rational numbers in a variety of forms.				
7.3 Number and operations. The student applies mathematical process standards to add, subtract, multiply, and divide while solving problems and justifying solutions.				

Process (Tools to Know)	Unit	CHECKPOINT 1	2	3
7.1(A) apply math in everyday situations Ⓚ 7.1(B) use problem-solving models Ⓚ *connected 7.1(C)*				

Content	Unit	CHECKPOINT 1	2	3
Representation of Rational Numbers				
7.2(A) extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of rational numbers				
Operations of Rational Numbers				
7.3(B) apply and extend previous understandings of operations to solve problems using addition, subtraction, multiplication, and division of rational numbers				
7.3(A) add, subtract, multiply, and divide rational numbers fluently				

Process (Ways to Show)	Unit	CHECKPOINT 1	2	3
7.1(E) create representations 7.1(F) analyze information Ⓚ *connected 7.1(D), 7.1(G)*				

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>> Proportional Reasoning	Unit	CHECKPOINT 1	2	3
7.4 **Proportionality.** The student applies mathematical process standards to represent and solve problems involving proportional relationships.				
7.7 **Expressions, equations, and relationships.** The student applies mathematical process standards to represent linear relationships using multiple representations.				

Process (Tools to Know)	Unit	CHECKPOINT 1	2	3
7.1(A) apply math in everyday situations Ⓚ 7.1(B) use problem-solving models Ⓚ *connected 7.1(C)*				

Content	Unit	CHECKPOINT 1	2	3
Constant Rate of Change				
7.4(A) represent constant rates of change in mathematical and real-world problems given pictorial, tabular, verbal, numeric, graphical, and algebraic representations, including $d = rt$ Ⓚ				
7.4(B) calculate unit rates from rates in mathematical and real-world problems				
7.4(C) determine the constant of proportionality ($k = y/x$) within mathematical and real-world problems				
Conversions				
7.4(E) convert between measurement systems, including the use of proportions and the use of unit rates				
Ratios/Rates/Percentages				
7.4(D) solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and financial literacy problems Ⓚ				
Conceptual Development of Non-Proportional Reasoning				
7.7(A) represent linear relationships using verbal descriptions, tables, graphs, and equations that simplify to the form $y = mx + b$ Ⓚ				

Process (Ways to Show)	Unit	CHECKPOINT 1	2	3
7.1(E) create representations 7.1(F) analyze information Ⓚ *connected 7.1(D), 7.1(G)*				

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

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>> Probability	Unit	CHECKPOINT 1	2	3
7.6 Proportionality. The student applies mathematical process standards to use probability and statistics to describe or solve problems involving proportional relationships.				

Process (Tools to Know)	Unit	CHECKPOINT 1	2	3
7.1(A) apply math in everyday situations Ⓚ 7.1(B) use problem-solving models Ⓚ *connected 7.1(C)*				

Content	Unit	CHECKPOINT 1	2	3
Representation of Probability				
7.6(A) represent sample spaces for simple and compound events using lists and tree diagrams				
7.6(B) select and use different simulations to represent simple and compound events with and without technology				
Determination of Probability				
7.6(I) determine experimental and theoretical probabilities related to simple and compound events using data and sample spaces				
7.6(E) find the probabilities of a simple event and its complement and describe the relationship between the two				
Application of Probability				
7.6(H) solve problems using qualitative and quantitative predictions and comparisons from simple experiments				
7.6(C) make predictions and determine solutions using experimental data for simple and compound events				
7.6(D) make predictions and determine solutions using theoretical probability for simple and compound events				
7.6(F) use data from a random sample to make inferences about a population				

Process (Ways to Show)	Unit	CHECKPOINT 1	2	3
7.1(E) create representations 7.1(F) analyze information Ⓚ *connected 7.1(D), 7.1(G)*				

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

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Grade 7 Math

Equations and Inequalities	Unit	CHECKPOINT 1	2	3
7.10 **Expressions, equations, and relationships.** The student applies mathematical process standards to use one-variable equations and inequalities to represent situations.				
7.11 **Expressions, equations, and relationships.** The student applies mathematical process standards to solve one-variable equations and inequalities.				

Process (Tools to Know)	Unit	CHECKPOINT 1	2	3
7.1(A) apply math in everyday situations Ⓚ 7.1(B) use problem-solving models Ⓚ *connected 7.1(C)*				

Content	Unit	CHECKPOINT 1	2	3
Representation and Solutions of Equations/Inequalities				
7.11(A) model and solve one-variable, two-step equations and inequalities Ⓚ				
7.10(B) represent solutions for one-variable, two-step equations and inequalities on number lines				
7.11(B) determine if the given value(s) make(s) one-variable, two-step equations and inequalities true				
Application of Equations/Inequalities				
7.10(A) write one-variable, two-step equations and inequalities to represent constraints or conditions within problems				
7.10(C) write a corresponding real-world problem given a one-variable, two-step equation or inequality				
7.11(C) write and solve equations using geometry concepts, including the sum of the angles in a triangle, and angle relationships		**Data included in "Geometry and Measurement"**		

Process (Ways to Show)	Unit	CHECKPOINT 1	2	3
7.1(E) create representations 7.1(F) analyze information Ⓚ *connected 7.1(D), 7.1(G)*				

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>> Geometry and Measurement	Unit	CHECKPOINT 1	2	3
7.5 **Proportionality.** The student applies mathematical process standards to use geometry to describe or solve problems involving proportional relationships.				
7.8 **Expressions, equations, and relationships.** The student applies mathematical process standards to develop geometric relationships with volume.				
7.9 **Expressions, equations, and relationships.** The student applies mathematical process standards to solve geometric problems.				
Connected Knowledge and Skills 7.4, 7.11				

Process (Tools to Know)	Unit	CHECKPOINT 1	2	3
7.1(A) apply math in everyday situations Ⓚ				
7.1(B) use problem-solving models Ⓚ *connected 7.1(C)*				

Content	Unit	CHECKPOINT 1	2	3
Angle Relationships				
7.11(C) write and solve equations using geometry concepts, including the sum of the angles in a triangle, and angle relationships				
Similarity				
7.5(C) solve mathematical and real-world problems involving similar shape and scale drawings				
7.5(A) generalize the critical attributes of similarity, including ratios within and between similar shapes				
Conversions				
7.4(E) convert between measurement systems, including the use of proportions and the use of unit rates		**Data included in "Proportional Reasoning"**		
Area				
7.9(C) determine the area of composite figures containing combinations of rectangles, squares, parallelograms, trapezoids, triangles, semicircles, and quarter circles				
7.9(D) solve problems involving the lateral and total surface area of a rectangular prism, rectangular pyramid, triangular prism, and triangular pyramid by determining the area of the shape's net Ⓚ				
Circles				
7.9(B) determine the circumference and area of circles				
7.5(B) describe π as the ratio of the circumference of a circle to its diameter				
7.8(C) use models to determine the approximate formulas for the circumference and area of a circle and connect the models to the actual formulas				
Volume				
7.9(A) solve problems involving the volume of rectangular prisms, triangular prisms, rectangular pyramids, and triangular pyramids Ⓚ				
7.8(A) model the relationship between the volume of a rectangular prism and a rectangular pyramid having both congruent bases and heights and connect that relationship to the formulas				
7.8(B) explain verbally and symbolically the relationship between the volume the of a triangular prism and a triangular pyramid having both congruent bases and heights and connect that relationship to the formulas				

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Process (Ways to Show)		Unit	CHECKPOINT		
			1	2	3
7.1(E) create representations 7.1(F) analyze information Ⓧ *connected 7.1(D), 7.1(G)*					

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

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Data Analysis	Unit	CHECKPOINT 1	2	3
7.12 **Measurement and data.** The student applies mathematical process standards to use statistical representations to analyze data. **Connected Knowledge and Skills 7.6**				

Process (Tools to Know)	Unit	CHECKPOINT 1	2	3
7.1(A) apply math in everyday situations Ⓚ 7.1(B) use problem-solving models Ⓚ *connected 7.1(C)*				

Content	Unit	CHECKPOINT 1	2	3
Interpretation of Data				
7.6(G) solve problems using data represented in bar graphs, dot plots, and circle graphs, including part-to-whole and part-to-part comparisons and equivalents Ⓚ				
7.12(B) use data from a random sample to make inferences about a population				
Comparison of Data				
7.12(A) compare two groups of numeric data using comparative dot plots or box plots by comparing their shapes, centers, and spreads				
7.12(C) compare two populations based on data in random samples from these populations, including informal comparative inferences about differences between the two populations				

Process (Ways to Show)	Unit	CHECKPOINT 1	2	3
7.1(E) create representations 7.1(F) analyze information Ⓚ *connected 7.1(D), 7.1(G)*				

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Teacher Learning Report
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Personal Financial Literacy	Unit	CHECKPOINT 1	2	3
7.13 **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.				

Process (Tools to Know)	Unit	CHECKPOINT 1	2	3
7.1(A) apply math in everyday situations Ⓚ 7.1(B) use problem-solving models Ⓚ *connected 7.1(C)*				

Content	Unit	CHECKPOINT 1	2	3
Budgets				
7.13(B) identify the components of a personal budget, including income; planned savings for college, retirement, and emergencies; taxes; and fixed and variable expenses, and calculate what percentage each category comprises of the total budget				
7.13(C) create and organize a financial assets and liabilities record and construct a net worth statement				
Calculations				
7.13(A) calculate the sales tax for a given purchase and calculate income tax for earned wages				
7.13(B) identify the components of a personal budget, including income; planned savings for college, retirement, and emergencies; taxes; and fixed and variable expenses, and calculate what percentage each category comprises of the total budget				
7.13(D) use a family budget estimator to determine the minimum household budget and average hourly wage needed for a family to meet its basic needs in the student's city or another large city nearby				
7.13(E) calculate and compare simple interest and compound interest earnings				
7.13(F) analyze and compare monetary incentives, including sales, rebates, and coupons				

Process (Ways to Show)	Unit	CHECKPOINT 1	2	3
7.1(E) create representations 7.1(F) analyze information Ⓚ *connected 7.1(D), 7.1(G)*				

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

TOOLS TO KNOW		Unit	CHECKPOINT 1	CHECKPOINT 2	CHECKPOINT 3
7.1(A)	apply mathematics to problems arising in everyday life, society, and the workplace Ⓚ				
7.1(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 Ⓚ				
7.1(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		
7.1(D)	communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate				
7.1(E)	create and use representations to organize, record, and communicate mathematical ideas				
7.1(F)	analyze mathematical relationships to connect and communicate mathematical ideas Ⓚ				
7.1(G)	display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication				