

Math TEKS for 6th Grade: 2013-2014

Primary Areas of Focus: Use ratios to describe direct proportional relationships involving number, geometry, measurement, probability and adding/subtracting decimals and fractions. (Graphing Technology Allowed)

Cat. 1: Explore mathematical relationships and describe increasingly complex situations

Cat. 2: Describe how a change in one quantity in a relationship results in a change in the other, connect verbal, numeric, graphic, and symbolic representations of relationships

Cat. 3: Communicate info about geometric figures by quantifying attributes

Cat. 4: Generalize procedures from measurement & solve

Cat. 5: Use statistics, data, & concepts of probability to draw conclusions, evaluate arguments, & make recommendations

Note: Statements that contain "including" reference content that must be mastered, while "such as" are intended as possible illustrative examples.

Underlying Processes & Mathematical Tools

PROCESS: (7 TEKS)		*Incorporated into 75% of test questions*	8-Week Periods:	1st	2nd	3rd	4th
6.11A	*	Identify and Apply Math in Everyday Experiences & across subjects					
6.11B	*	Problem Solving Model - 1) Analyze Info, 2) Make a plan, 3) Solve, 4) Justify, & 5) Evaluate the process					
6.11C	*	Select or Develop Problem-Solving Strategy: 1) Draw, 2) Find Pattern, 3) Guess/Check, 4) Acting, 5) Make a Table, 6) Work Simpler Problem, 7) Work Backwards					
6.11D	*	Use Tools such as real objects, manipulatives, technology, mental math, & estimation to solve problems					
6.12A	*	Communicate math ideas using language, tools, appropriate units, and graphical, numerical, physical, or algebraic models					
6.13A	*	Make conjectures from patterns or sets of examples & non-examples					
6.13B	*	Validate his/her conclusions using mathematical properties & relationships					

Category 1: Numbers, Operations, & Quantitative Reasoning

CONTENT: (31 TEKS)		8-Week Periods:	1st	2nd	3rd	4th
Rational Numbers in Equivalent Forms						
6.1A	S	Compare and order non-negative rational numbers				
6.1B	R	Generate equivalent forms of rational #s including whole numbers, fractions, & decimals				
6.1C	S	Use integers to represent real-life situations				
6.1D	S	Write prime factorization using exponents				
6.1E	S	Identify factors of a positive integer, common factors, & the greatest common factor				
6.1F	S	Identify multiples of a positive integer & common multiples & the least common multiple				

Add, Subtract, Multiply, Divide, & Estimate

6.2A	S	Model situations using Adding & Subtracting Fractions (use objects/pictures/#s, words)				
6.2B	R	Add & Subtract to solve problems involving fractions & decimals				
6.2C	R	Multiply & Divide to solve problems involving equivalent ratios & rates				
6.2D	S	Estimate & Round to approximate results & to solve problems where exact answers are not required				
6.2E	R	Use order of operations to simplify expressions (without exponents)				

Category 2: Patterns, Relationships, & Algebraic Reasoning

Ratios

6.3A	S	Use ratios to describe proportional situations				
6.3B	S	Represent ratios & percents (%) with concrete models, fractions, & decimals				
6.3C	R	Use ratios to make predictions in proportional situations				

Letters as Variables in Math Expressions

6.4A	R	Use tables & symbols to represent & describe proportional & other relationships involving conversions, arithmetic sequences (with a constant rate of change), perimeter, and area.				
6.4B	S	Use tables of data to generate formulas representing relationships involving perimeter, area, volume of a rectangular prism, etc.				

Letters to Represent an Unknown in an Equation

6.5A	R	Formulate equations from problem situations described by linear relationships.				
8-Week Periods:			1st	2nd	3rd	4th

Category 3: Geometry & Spatial Reasoning

Vocabulary to describe angles, polygons, & circles

6.6A	S	Use angle measurements to classify angles as acute, obtuse, or right				
6.6B	S	Identify relationships involving angles in triangles & quadrilaterals				
6.6C	R	Describe the relationship between radius, diameter, & circumference of a circle				

Coordinate geometry to identify locations in two dimensions

6.7A	S	Locate & Name Points on Coordinate Plane (using ordered pairs of non-negative rational numbers)				
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Category 4: Measurement

Estimate & Measure - Length, Area, Time, Temperature, Volume, Weight, & Angles

6.8A	S	Estimate measurements (including circumference) & evaluate reasonableness				
6.8B	R	Select & Use Appropriate units, tools, or formulas to Measure Length, Perimeter, Area, & Volume, Time & Temperature, and Weight				
6.8C	S	Measure angles				
6.8D	S	Convert measures within same measurement system (Metric & Customary)				

Category 5: Probability & Statistics

Experimental & Theoretical Probability to Make Predictions

6.9A	S	Construct sample spaces using lists & tree diagrams				
6.9B	S	Find the probabilities of a simple event & its complement & describe relationship b/t the two				

Statistical Representations to Analyze Data

6.10A	S	Select & Use appropriate representations to display the same data (including line plot, line graph, bar graph, and stem & leaf plot)				
6.10B	S	Identify Mean (using objects/pictures) & Median, Mode, and Range				
6.10C	S	Sketch circle graphs to display data				
6.10D	R	Solve problems by collecting, organizing, displaying, and interpreting data				

Summary of Readiness Standards (The Big Rocks) (10 of 31 TEKS)

6.1B	R	Generate equivalent forms of rational #s including whole numbers, fractions, & decimals	Equivalent Forms (Whole #, Fractions, Decimals)
6.2B	R	Add & Subtract to solve problems involving fractions & decimals	Add/Subtract Fractions & Decimals
6.2C	R	Multiply & Divide to solve problems involving equivalent ratios & rates	Multiply/Divide Ratios/Rates
6.2E	R	Use order of operations to simply expressions (without exponents)	Order of Operations
6.3C	R	Use ratios to make predictions in proportional situations	Ratios to Make Predictions
6.4A	R	Use tables & symbols to represent & describe proportional & other relationships involving conversions, arithmetic sequences (with a constant rate of change), perimeter, and area.	Use Tables & Symbols to represent relationships
6.5A	R	Formulate equations from problem situations described by linear relationships	Formulate Equations
6.6C	R	Describe the relationship between radius, diameter, & circumference of a circle	Radius, Diameter, & Circumference
6.8B	R	Select & Use Appropriate units, tools, or formulas to Measure Length, Perimeter, Area, & Volume, Time & Temperature, and Weight	Measure length, perimeter, area, volume, Time, Temperature, Weight
6.10D	R	Solve problems by collecting, organizing, displaying, and interpreting data	Managing Data

***3-4 questions will be asked on each of these (approximately 33 of 52 question on STAAR test)**

STAAR Test: Tuesday, April 22, 2014, Last Day of School: Friday, May 23