

# Math STAAR TEKS for 7th Grade: 2013-2014

<b>Primary Areas of Focus:</b> Use direct proportional relationships in number, geometry, measurement, and probability; apply A,S,M,&D of decimals, fractions, and integers; and use statistical measures to describe data.
<b>Cat. 1:</b> Explore mathematical relationships and describe increasingly complex situations
<b>Cat. 2:</b> 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
<b>Cat. 3:</b> Communicate info about geometric figures by quantifying attributes
<b>Cat. 4:</b> Generalize procedures from measurement & solve
<b>Cat. 5:</b> Use statistics, data, & concepts of probability to draw conclusions, evaluate arguments, & make recommendation
<b>Note:</b> Statements that contain "including" reference content that must be mastered, while "such as" are intended as possible illustrative examples.

The following skills will not be listed under a separate category. Instead, they will be incorporated						
PROCESS: (7 TEKS)		8-Week Periods:	1st	2nd	3rd	4th
<b>7.13 (Use Math to Solve Everyday Experiences in and out of school and across disciplines)</b>						
7.13A	Identify and apply math to everyday situations					
7.13B	<i>Use a problem-solving model for:</i> 1. Understanding the Problem 2. Making a Plan 3. Carrying out the Plan 4. Evaluating the Solution for Reasonableness					
7.13C	<i>Select/develop an appropriate problem-solving strategy from</i> 1. Draw a Picture                      2. Looking for Patterns 3. Systematic Guessing and Checking 4. Acting it Out                      5. Make a Table 6. Work a Simpler Problem    7. Work Backwards					
7.13D	technology or techniques such as mental math, estimation, and number sense to solve problems					
<b>Use Mathematical language, representations, &amp; models</b>						
7.14A	Communicate math ideas using language, efficient tools, appropriate units, and graphical, numerical, physical, or algebraic math models.					
<b>Use Logical reasoning to make conjectures and verify conclusions</b>						
7.15A	Make conjectures from patterns or sets of examples & nonexamples					
7.15B	Validate his/her conclusions using math properties and relationships					

Summary of Readiness Standards (The Big Rocks) (12 of 35 TEKS)			
7.1B	R	Convert Fractions, Decimals, Whole Numbers & Percents	Convert 1/2,.5, 50%
7.2B	R	Add, Subtract, Multiply, & Divide Fractions/Decimals	A, S, M & D Fract/Dec
7.2F	R	Select & Use Appropriate Operations to Solve Problems and Justify Solutions	Select, Solve, & Justify
7.3A	R	Estimate & find solutions to problems involving percent (%)	Estimate & Solve for %
7.3B	R	Estimate & find solutions for proportional relationships (similarity, scaling, unit costs, measurement)	Similarity, Scaling, Unit Costs, Measurement
7.5B	R	Formulate Problem Situations when given an equation & Vice Versa (Create your own problem)	Problem to Equations
7.6D	R	Use Critical Attributes to Define Similarity	Define Similarity
7.7B	R	Graph Reflections Across Horizontal/Vertical Axis & Graph Translations on plane	Reflections/Translations
7.9A	R	Estimate & Solve Length (Perimeter/Circumference) & Area (Polygons, etc.)	Per/Circ, Length, & Area
7.9C	R	Estimate & Solve for Volume of Prisms & Cylinders	Volume - Prisms/Cylinders
7.11B	R	Make Inferences & Convincing Arguments on Analysis of Given Collected Data	Inferences about Data
7.12B	R	Choose among Mean, Median, Mode, & Range to Describe Data & Justify Choice	Mean, Median, Mode, Range
<b>*3-4 questions will be asked on each of these (approximately 36 of 54 question on STAAR test)</b>			

<b>STAAR Test: Tuesday, April 22, 2014, Last Day of School: Friday, May 23</b>						
<b>CONTENT: (35 TEKS)</b>		<b>8-Week Periods:</b>	<b>1st</b>	<b>2nd</b>	<b>3rd</b>	<b>4th</b>

**Category 1: Numbers, Operations, & Quantitative Reasoning****(1) Use Numbers in a Variety of Equivalent Forms (1/2, .5, 50%, 3 out of 6)**

7.1A	S	Compare and Order Integers and Positive Rational Numbers				
7.1B	R	Convert Fractions, Decimals, Whole Numbers & Percents (mentally, on paper, with calc.)				
7.1C	S	Represent Squares & Square Roots using Geometric Models				
<b>(2) Add, Subtract, Multiply, &amp; Divide to SOLVE Problems and JUSTIFY Solutions</b>						
7.2A	S	Represent Multiplication/Division involving fractions/decimals with models, words, #s, etc.				
7.2B	R	Add, Subtract, Multiply, & Divide to Solve Problems involving Fractions/Decimals				
7.2C	S	Use Models (objects, pics, number lines, etc.) to A,S,M,&D integers & connect to algorithms				
7.2D	S	Use division to find unit rates/ratios for speed, density, price, recipes, & student-teacher ratios				
7.2E	S	Simplify numerical expressions involving order of operations & exponents				
7.2F	R	Select & Use Appropriate Operations to Solve Problems and Justify Solutions				
7.2G	S	Determine Reasonableness of a Solution to a Problem (Does it make sense?)				

**Category 2: Patterns, Relationships, & Algebraic Reasoning****(3) Estimation & Direct Proportional Relationships**

7.3A	R	Estimate & find solutions to problems involving percent (%)				
7.3B	R	Estimate & find solutions for proportional relationships (similarity, scaling, unit costs, measurement)				

**(4) Measurement & Proportional Relationships (Numerical, Geometric, Verbal, & Symbolic Form)**

7.4A	S	Generate Formulas for unit conversion (customary/metric) Perimeter, Area, Circumference, Volume, Scaling				
7.4B	S	Graph Data for concepts like Conversions, Perimeter, Area, Circumference, Volume, and Scaling				
7.4C	S	Use words & symbols to describe relationships b/t terms in arithmetic sequence & position in sequence				

**(5) Equations**

7.5A	S	Use Concrete and Pictorial Models to solve equations & Use Symbols to Record the Actions				
7.5B	R	Formulate Problem Situations when given an equation & Vice Versa (Create your own problem)				

**Category 3: Geometry & Spatial Reasoning****(6) Classify 2D & 3D Figures**

7.6A	S	Use Angle measurements to classify pairs of angles (complementary/supplementary)				
7.6B	S	Use Properties to Classify Triangles & Quadrilaterals				
7.6C	S	Use Properties to Classify 3-D Figures (Pyramids, Cones, Prisms, and Cylinders)				
7.6D	R	Use Critical Attributes to Define Similarity				

**(7) Use Coordinate Geometry to Describe Locations**

7.7A	S	Locate & Name Points on a Coordinate Plane using Ordered Pairs of Integers				
7.7B	R	Graph Reflections Across Horizontal/Vertical Axis & Graph Translations on plane				

**(8) Use Geometry to Model & Describe Physical World**

7.8A	S	Sketch 3-D Figures				
7.8B	S	Make a Net (2-D Figure) of the Surface Area of a 3-D Figure				
7.8C	S	Use Geometry to solve problems involving Art & Architecture				

**Category 4: Measurement****(9) Estimation & Measurement**

7.9A	R	Estimate & Solve Length (Perimeter/Circumference) & Area (Polygons, etc.)				
7.9B	S	Connect Models to Formulas for Volume of Prisms (Triangular/Rectangular) & Cylinders				
7.9C	R	Estimate & Solve for Volume of Prisms & Cylinders				

**Category 5: Probability & Statistics****(10) Probability Experiments - Use Math/Geometry to Describe Real Life Events**

7.10A	S	Construct Sample Spaces for Simple or Composite Experiments				
7.10B	S	Find Probability of Independent Events				

**(11) Importance of Data Display**

7.11A	S	Select, Use, & Justify Appropriate Visuals (Line Plot, Line Graph, Bar Graph, Stem/Leaf Plot, Circle Graph, Venn Diagram)				
7.11B	R	Make Inferences & Convincing Arguments on Analysis of Given Collected Data				

**(12) Measures of Central Tendency & Variability to Describe Data**

7.12A	S	Describe Data Using Mean, Median, Mode, and Range				
7.12B	R	Choose among Mean, Median, Mode, & Range to Describe Data & Justify Choice				