

07.A-N The Number System			
Big Idea M07.A-N.1 Apply and extend previous understandings of operations to add, subtract, multiply, and divide rational numbers.			
M07.A-N.1.1 Solve real-world and mathematical problems involving the four operations with rational numbers		How do we solve real-world and mathematical problems involving the four operations with rational numbers?	
Concepts	Competencies	Resources	Assessments
M07.A-N.1.1.1 Apply properties of operations to add and subtract rational numbers, including real-world contexts. M07.A-N.1.1.2 Represent addition and subtraction on a horizontal or vertical number line. M07.A-N.1.1.3 Apply properties of operations to multiply and divide rational numbers, including real-world contexts; demonstrate that the decimal form of a rational number terminates or eventually repeats.	CC.2.1.7.E.1 Apply and extend previous understandings of operations with fractions to operations with rational numbers.	Math in Focus Text - Chapter 1 - Extra Practice Workbook - Enrichment Workbook - Re-teaching Workbook - Activities Workbook - Online resources (HMH) Exact Path Diagnostics	District developed curriculum based assessment for rational numbers District Developed Cumulative Assessment Exact Path Benchmark PSSA
Vocabulary Commutative property, associative property, distributive property, rational numbers, terminating and repeating decimals, irrational numbers, real numbers, whole numbers, natural numbers, integers			

M07.A-R Ratios and Proportional Relationships	
Big Idea M07.A-R.1 Demonstrate an understanding of proportional relationships	
M07.A-R.1.1 Analyze, recognize, and represent proportional relationships and use them to solve real-world and mathematical problems.	How do we analyze, recognize, and represent proportional relationships? How do we solve real-world and mathematical problems with

		proportional relationships?	
Concepts	Competencies	Resources	Assessments
M07.A-R.1.1.1 Compute unit rates associated with ratios of fractions, including ratios of lengths, areas, and other quantities measured in like or different units. <i>Example: If a person walks $\frac{1}{2}$ mile in each $\frac{1}{4}$ hour, compute the unit rate as the complex fraction $\frac{1/2}{1/4}$ miles per hour, equivalently 2 miles per hour.</i> M07.A-R.1.1.2 Determine whether two quantities are proportionally related (e.g., by testing for equivalent ratios in a table, graphing on a coordinate plane and observing whether the graph is a straight line through the origin). M07.A-R.1.1.3 Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships. M07.A-R.1.1.4 Represent proportional relationships by equations. <i>Example: If total cost t is proportional to the number n of items purchased at a constant price p, the relationship between</i>	CC.2.1.7.D.1 Analyze proportional relationships and use them to model and solve real-world and mathematical problems.	Math in Focus Transition Guide Math in Focus Text • Chapter 5 • Extra Practice Workbook • Enrichment Workbook • Re-teaching Workbook • Activities Workbook • Online resources (HMH) Exact Path Diagnostics	District developed curriculum based assessment for proportional relationships District Developed Cumulative Assessment Exact Path Benchmark PSSA

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<i>the total cost and the number of items can be expressed as $t = pn$.</i> M07.A-R.1.1.5 Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$, where r is the unit rate. M07.A-R.1.1.6 Use proportional relationships to solve multi-step ratio and percent problems. <i>Example: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease.</i>			
Vocabulary: ratio, proportional, proportionally related, constant of proportionality, simple interest, markups and markdowns, gratuities, commissions, percent increase and decrease			

M07.B-E Expressions and Equations			
Big Idea			
M07.B-E.1 Represent expressions in equivalent forms.			
M07.B-E.1.1 Use properties of operations to generate equivalent expressions.	How do we use properties of operations to generate equivalent expressions?		
Concepts	Competencies	Resources	Assessments
M07.B-E.1.1.1 Apply properties of operations to add, subtract, factor, and expand linear expressions with rational coefficients. <i>Example 1: The expression $\frac{1}{2} \cdot (x + 6)$ is equivalent to $\frac{1}{2} \cdot x + 3$. Example 2: The expression $5.3 - y + 4.2$ is equivalent to $9.5 - y$ (or $-y +$</i>	CC.2.2.7.B.1 Apply properties of operations to generate equivalent expressions	Math in Focus Text - Chapter 4 - Extra Practice Workbook - Enrichment Workbook - Re-teaching Workbook - Activities Workbook	District developed curriculum based assessment for equations District Developed Cumulative Assessment Exact Path Benchmark

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9.5). <i>Example 3: The expression $4w - 10$ is equivalent to $2(2w - 5)$.</i>		Online resources (HMH) Exact Path Diagnostics	PSSA
Vocabulary: linear expression, factor, rational coefficients			

M07.B-E Expressions and Equations			
Big Idea M07.B-E.2 Solve real-world and mathematical problems using numerical and algebraic expressions, equations, and inequalities.			
M07.B-E.2.1 Solve multi-step real-world and mathematical problems posed with positive and negative rational numbers.		How do we solve multi-step real-world and mathematical problems posed with positive and negative rational numbers?	
Concepts	Competencies	Resources	Assessments
M07.B-E.2.1.1 Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate. <i>Example: If a woman making \$25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or \$2.50, for a new salary of \$27.50 an hour (or $1.1 \times \\$25 = \\27.50).</i>	CC.2.2.7.B.3 Model and solve real-world and mathematical problems by using and connecting numerical, algebraic, and/or graphical representations.	Math in Focus Text - Chapter 2 - Extra Practice Workbook - Enrichment Workbook - Re-teaching Workbook - Activities Workbook - Online resources (HMH) Exact Path Diagnostics	District developed curriculum based assessments for rational numbers District Developed Cumulative Assessment Exact Path Benchmark PSSA
Vocabulary:			

M07.B-E Expressions and Equations
Big Idea M07.B-E.2 Solve real-world and mathematical problems using numerical and algebraic expressions,

equations, and inequalities.			
M07.B-E.2.2 Use variables to represent quantities in a real-world or mathematical problem and construct simple equations and inequalities to solve problems.		How do we use variables to represent quantities in a real-world or mathematical problem? How do we construct simple equations and inequalities to solve problems?	
Concepts	Competencies	Resources	Assessments
M07.B-E.2.2.1 Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p, q, and r are specific rational numbers. <i>Example: The perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?</i> M07.B-E.2.2.2 Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p, q, and r are specific rational numbers, and graph the solution set of the inequality. <i>Example: A salesperson is paid \$50 per week plus \$3 per sale. This week she wants her pay to be at least \$100. Write an inequality for the number of sales the salesperson needs to make and describe the solutions.</i>	CC.2.2.7.B.3 Model and solve real-world and mathematical problems by using and connecting numerical, algebraic, and/or graphical representations.	Math in Focus Text • Chapter 3 • Chapter 4 • Extra Practice Workbook • Enrichment Workbook • Re-teaching Workbook • Activities Workbook • Online resources (HMH) Exact Path Diagnostics	District developed curriculum based assessment for equations District developed curriculum based assessment for inequalities District Developed Cumulative Assessment Exact Path Benchmark PSSA
Vocabulary:			

M07.B-E Expressions and Equations
Big Idea M07.B-E.2 Solve real-world and mathematical problems using numerical and algebraic expressions,

equations, and inequalities.			
M07.B-E.2.3 Determine the reasonableness of the answer(s) in problem solving situations.		How do we determine the reasonableness of the answer(s) in problem solving situations?	
Concepts	Competencies	Resources	Assessments
M07.B-E.2.3.1 Determine the reasonableness of answer(s) or interpret the solution(s) in the context of the problem. <i>Example: If you want to place a towel bar that is $9\frac{3}{4}$ inches long in the center of a door that is $27\frac{1}{2}$ inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.</i>	CC.2.2.7.B.3 Model and solve real-world and mathematical problems by using and connecting numerical, algebraic, and/or graphical representations.	Math in Focus Text – throughout Exact Path Diagnostics	District Developed Cumulative Assessment Exact Path Benchmark PSSA
Vocabulary			
M07.C-G Geometry			
Big Idea			
M07.C-G.1 Demonstrate an understanding of geometric figures and their properties.			
M07.C-G.1.1 Describe and apply properties of geometric figures.		How do we describe and apply properties of geometric figures?	
Concepts	Competencies	Resources	Assessments
M07.C-G.1.1.1 Solve problems involving scale drawings of geometric figures, including finding length and area. M07.C-G.1.1.2 Identify or describe the properties of all types of triangles based on angle and side measures. M07.C-G.1.1.3 Use and apply the triangle inequality theorem. M07.C-G.1.1.4 Describe the two-	CC.2.3.7.A.2 Visualize and represent geometric figures and describe the relationships between them.	Math in Focus Text - Chapter 8 - Extra Practice Workbook - Enrichment Workbook - Re-teaching Workbook - Activities Workbook - Online resources (HMH) Exact Path Diagnostics	District developed curriculum based assessment for geometric figures District Developed Cumulative Assessment Exact Path Benchmark PSSA

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dimensional figures that result from slicing three-dimensional figures. <i>Example: Describe plane sections of right rectangular prisms and right rectangular pyramids.</i>			
Vocabulary: acute triangle, equilateral triangle, isosceles triangle, obtuse triangle, right triangle, scalene triangle, triangle inequality theorem, scale drawing			

M07.C-G Geometry			
Big Idea M07.C-G.2 Solve real-world and mathematical problems involving angle measure, circumference, area, surface area, and volume.			
M07.C-G.2.1 Identify, use, and describe properties of angles and their measures.		How do we identify, use, and describe properties of angles and their measures?	
Concepts	Competencies	Resources	Assessments
M07.C-G.2.1.1 Identify and use properties of supplementary, complementary, and adjacent angles in a multistep problem to write and solve simple equations for an unknown angle in a figure. M07.C-G.2.1.2 Identify and use properties of angles formed when two parallel lines are cut by a transversal (e.g., angles may include alternate interior exterior, vertical, corresponding).	CC.2.3.7.A.1 Solve real-world and mathematical problems involving angle measure, area, surface area, circumference, and volume.	Math in Focus Text - Chapter 6 - Extra Practice Workbook - Enrichment Workbook - Re-teaching Workbook - Activities Workbook - Online resources (HMH) Exact Path Diagnostics	District developed curriculum based assessment for angles and their measures District Developed Cumulative Assessment Exact Path Benchmark PSSA
Vocabulary: supplementary angles, complementary angles, adjacent angles, alternate exterior angles, alternate interior angles, corresponding angles, vertical angles			

M07.C-G Geometry

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Big Idea M07.C-G.2 Solve real-world and mathematical problems involving angle measure, circumference, area, surface area, and volume.			
M07.C-G.2.2 Determine circumference, area, surface area, and volume.		How do we determine circumference, area, surface area, and volume?	
Concepts	Competencies	Resources	Assessments
M07.C-G.2.2.1 Find the area and circumference of a circle. Solve problems involving area and circumference of a circle(s). Formulas will be provided. M07.C-G.2.2.2 Solve real-world and mathematical problems involving area, volume, and surface area of two and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. Formulas will be provided.	CC.2.3.7.A.1 Solve real-world and mathematical problems involving angle measure, area, surface area, circumference, and volume	Math in Focus Text - Chapter 8 - Extra Practice Workbook - Enrichment Workbook - Re-teaching Workbook - Activities Workbook - Online resources (HMH) Exact Path Diagnostics	District developed curriculum based assessment for geometric figures District Developed Cumulative Assessment Exact Path Benchmark PSSA
Vocabulary: circumference, surface area, polygons, quadrilaterals, right prisms			

M07. D-S Statistics and Probability			
Big Idea M07. D-S.1 Use random sampling to draw inferences about a population.			
M07. D-S.1.1 Use random samples.		How do we use random samples?	
Concepts	Competencies	Resources	Assessments
M07.D-S.1.1.1 Determine whether a sample is a random sample given a real-world situation. M07.D-S.1.1.2 Use data from a random sample to draw inferences	CC.2.4.7.B.1 Draw inferences about populations based on random sampling concepts.	Math in Focus Text - Chapter 9 - Extra Practice Workbook - Enrichment Workbook	District developed curriculum based assessment for statistics District Developed Cumulative Assessment

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about a population with an unknown characteristic of interest. <i>Example 1: Estimate the mean word length in a book by randomly sampling words from the book.</i> <i>Example 2: Predict the winner of a school election based on randomly sampled survey data.</i>		• Re-teaching Workbook • Activities Workbook • Online resources (HMH) Exact Path Diagnostics	Exact Path Benchmark PSSA
Vocabulary: random sample			

M07. D-S Statistics and Probability			
Big Idea			
M07. D-S.2 Draw comparative inferences about populations.			
M07. D-S.2.1 Use statistical measures to compare two numerical data distributions.		How do we use statistical measures to compare two numerical data distributions?	
Concepts	Competencies	Resources	Assessments

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M07.D-S.2.1.1 Compare two numerical data distributions using measures of center and variability. <i>Example 1: The mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team. This difference is equal to approximately twice the variability (mean absolute deviation) on either team. On a line plot, note the difference between the two distributions of heights.</i> <i>Example 2: Decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth grade science book.</i>	CC.2.4.7.B.2 Draw informal comparative inferences about two populations.	Math in Focus Text • Chapter 9 • Extra Practice Workbook • Enrichment Workbook • Re-teaching Workbook • Activities Workbook • Online resources (HMH) Exact Path Diagnostics	District developed curriculum based assessment for statistics District Developed Cumulative Assessment Exact Path Benchmark PSSA
Vocabulary: measures of central tendency, mean, median, mode, range, box-and-whisker plot, dot plot, data distribution, population probability			

M07. D-S Statistics and Probability			
Big Idea			
M07. D-S.3 Investigate chance processes and develop, use, and evaluate probability models.			
M07. D-S.3.1 Predict or determine the likelihood of outcomes		How do we predict or determine the likelihood of outcomes?	
Concepts	Competencies	Resources	Assessments
M07.D-S.3.1.1 Predict or determine whether some outcomes are certain, more likely, less likely, equally likely, or impossible (i.e., a probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is	CC.2.4.7.B.3 Investigate chance processes and develop, use, and evaluate probability models.	Math in Focus Text • Chapter 10 • Extra Practice Workbook • Enrichment Workbook • Re-teaching Workbook • Activities Workbook	District developed curriculum based assessment for probability District Developed Cumulative Assessment Exact Path Benchmark

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neither unlikely nor likely, and a probability near 1 indicates a likely event).		Online resources (HMH) Exact Path Diagnostics	PSSA
Vocabulary: equally likely, chance event, outcome			

M07. D-S Statistics and Probability			
Big Idea			
M07. D-S.3 Investigate chance processes and develop, use, and evaluate probability models.			
M07. D-S.3.2 Use probability to predict outcomes.		How do we use probability to predict outcomes?	
Concepts	Competencies	Resources	Assessments
M07.D-S.3.2.1 Determine the probability of a chance event given relative frequency. Predict the approximate relative frequency given the probability. <i>Example: When rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times but probably not exactly 200 times.</i> M07.D-S.3.2.2 Find the probability of a simple event, including the probability of a simple event not occurring. <i>Example: What is the probability of not rolling a 1 on a number cube?</i>	CC.2.4.7.B.3 Investigate chance processes and develop, use, and evaluate probability models.	Math in Focus Text - Chapter 10 - Extra Practice Workbook - Enrichment Workbook - Re-teaching Workbook - Activities Workbook - Online resources (HMH) Exact Path Diagnostics	District developed curriculum based assessment for probability District Developed Cumulative Assessment Exact Path Benchmark PSSA
Vocabulary: relative frequency, compound event, independent event, dependent event, process of chance			