Pre-Algebra Honors

Curriculum Guide

Dunmore School District

Dunmore, PA

Pre-Algebra Honors

Prerequisite:

- Successful completion of Sixth Grade Mathematics

Pre-Algebra Honors is designed to meet the seventh grade PA Core standards. Four critical areas are the focus of the course: (1) developing understanding of and applying proportional relationships; (2) developing understanding of operations with rational numbers and working with expressions and linear equations; (3) solving problems involving scale drawings and informal geometric constructions, and working with two- and three-dimensional shapes to solve problems involving area, surface area, and volume, and (4) drawing inferences about populations based on samples. The mathematics skills to be studied this year form the foundation for Algebra, the basis for all later sequential mathematics classes. The Honors program provides mathematical depth and extension activities with the introduction of various Algebra skills. Mathematical skills and reasoning needed for problem-solving and mathematical confidence are emphasized.

Subject: Pre-Algebra Honors	Grade Level: 7	Date Completed: 6/07/17

1ˢᵗ Quarter

Topic	Resources	Standards
Add and Subtract Rational Numbers	**Big Ideas Red Chapter 1: 1.1, 1.2, 1.3** **Big Ideas Red Chapter 2: 2.2, 2.3**	**CC.2.1.7.E.1** **M07.A-N.1.1** **M07.A-N.1.1.1**
Add/Subtract on Number Lines	**Big Ideas Red Chapter 2: 2.2**	**CC.2.1.7.E.1** **M07.A-N.1.1** **M07.A-N.1.1.2**
Multiply/Divide Rational Numbers; repeating/terminating decimals	**Big Ideas Red Chapter 1: 1.1, 1.2, 1.3, 1.4, 1.5** **Big Ideas Red Chapter 2: 2.1, 2.2, 2.3, 2.4**	**CC.2.1.7.E.1** **M07.A-N.1.1** **M07.A-N.1.1.3**
Unit Rates	**Big Ideas Red Chapter 5: 5.1**	**CC.2.1.7.D.1** **M07.A-R.1.1** **M07.A-R.1.1.1**
Proportions (including graphs and tables)	**Big Ideas Red Chapter 5: 5.2, extension 5.2, 5.6**	**CC.2.1.7.D.1** **M07.A-R.1.1** **M07.A-R.1.1.2**
Constant of Proportionality	**Big Ideas Red Chapter 5: extension 5.2, 5.4, 5.5, 5.6**	**CC.2.1.7.D.1** **M07.A-R.1.1** **M07.A-R.1.1.3**
Proportional Relationships with equations	**Big Ideas Red Chapter 5: 5.3, 5.4, 5.6**	**CC.2.1.7.D.1** **M07.A-R.1.1** **M07.A-R.1.1.4**
Proportional Relationships with graphs	**Big Ideas Red Chapter 5: extension 5.2, 5.6**	**CC.2.1.7.D.1** **M07.A-R.1.1** **M07.A-R.1.1.5**

Multi-Step Proportional Relationships and Percent Problems	Big Ideas Red Chapter 5: 5.1, 5.3 Big Ideas Red Chapter 6: 6.3, 6.4, 6.5, 6.6, 6.7	CC.2.1.7.D.1 M07.A-R.1.1 M07.A-R.1.1.6

2nd Quarter

Topic	Resources	Standards
Simplifying Algebraic Expressions and Factoring	**Big Ideas Red Chapter 3: 3.1, 3.2, extension 3.2**	**CC.2.2.7.B.1** **M07.B-E.1.1** **M07.B-E.1.1.1**
Estimation	**Worksheets**	**CC.2.2.7.B.3** **A1.1.1.4** **A1.1.1.4.1**
Multi-Step Real-World problems with Percents	**Big Ideas Red Chapter 6: 6.1, 6.2, 6.4, 6.5**	**CC.2.2.7.B.3** **M07.B-E.2.1** **M07.B-E.2.1.1**
Solve Word Problems with Equations	**Big Ideas Red Chapter 3: 3.3, 3.4, 3.5**	**CC.2.2.7.B.3** **M07.B-E.2.2** **M07.B-E.2.2.1**
Solving Word Problems with Inequalities	**Big Ideas Red Chapter 4: 4.1, 4.2, 4.3, 4.4**	**CC.2.2.7.B.3** **M07.B-E.2.2** **M07.B-E.2.2.2**
Reasonableness of an Answer	**Big Ideas Red Chapter 6: 6.1, 6.2, 6.4**	**CC.2.2.7.B.3** **M07.B-E.2.3** **M07.B-E.2.3.1**
Use equations to solve for angles	**Big Ideas Red Chapter 7: 7.1, 7.2, extension 7.3**	**CC.2.3.7.A.1** **M07.C-G.2.1** **M07.C-G.2.1.1**
Angle Properties	**Worksheets**	**CC.2.3.7.A.1** **M07.C-G.2.1** **M07.C-G.2.1.2**
Circles	**Big Ideas Red Chapter 8: 8.1, 8.2, 8.3, 8.4**	**CC.2.3.7.A.1** **M07.C-G.2.2** **M07.C-G.2.2.1**

3rd Quarter

Topic	Resources	Standards
Real-world problems involving area, volume and surface area	**Big Ideas Red Chapter 8: 8.4, 9.1, Big Ideas Red Chapter 9: 9.2, 9.4, 9.5**	**CC.2.3.7.A.1** **M07.C-G.2.2** **M07.C-G.2.2.2**
Scale Drawings	**Big Ideas Red Chapter 7: 7.5**	**CC.2.3.7.A.2** **M07.C-G.1.1** **M07.C-G.1.1.1**
Types of Triangles	**Big Ideas Red Chapter 7: 7.3**	**CC.2.3.7.A.2** **M07.C-G.1.1** **M07.C-G.1.1.2**
Triangle Inequality Theorem	**Worksheets**	**CC.2.3.7.A.2** **M07.C-G.1.1** **M07.C-G.1.1.3**
Cross Sections	**Big Ideas Red Chapter 9: 9.5**	**CC.2.3.7.A.2** **M07.C-G.1.1** **M07.C-G.1.1.4**
Random sampling and valid inferences	**Big Ideas Red Chapter 10: 10.6**	**CC.2.4.7.B.1** **M07.D-S.1.1** **M07.D-S.1.1.1**
Predictions	**Big Ideas Red Chapter 10: 10.6, extension 10.6**	**CC.2.4.7.B.1** **M07.D-S.1.1** **M07.D-S.1.1.2**
Absolute Deviation and Measures of Central Tendency	**Big Ideas Red Chapter 10: 10.7**	**CC.2.4.7.B.2** **M07.D-S.2.1** **M07.D-S.2.1.1**
Compound Events	**Big Ideas Red Chapter 10: 10.4**	**CC.2.4.7.B.3** **A1.2.3.3** **A1.2.3.3.1**
Probability	**Big Ideas Red Chapter 10: 10.1, 10.2, 10.3**	**CC.2.4.7.B.3** **M07.D-S.3.1** **M07.D-S.3.1.1**

Experimental and Theoretical Probability	Big Ideas Red Chapter 10: 10.3	CC.2.4.7.B.3 M07.D-S.3.2 M07.D-S.3.2.1
Simple Events	Big Ideas Red Chapter 10: 10.1	CC.2.4.7.B.3 M07.D-S.3.2 M07.D-S.3.2.2

4th Quarter

Topic	Resources	Standards
Compound Events, Sample Spaces, Simulations	**Big Ideas Red Chapter 10: 10.4, 10.5, extension 10.5**	**CC.2.4.7.B.3** **M07.D-S.3.2** **M07.D-S.3.2.3**
Simplify expressions with Exponents	**Larson Pre-Algebra Chapter 4: 4.5, 4.6**	**CC.2.2.8.B.1** **A1.1.1.3** **A1.1.1.3.1**
Equivalent Expressions with Radicals and Integer Exponents	**Larson Pre-Algebra Chapter 4: 4.5, 4.6**	**CC.2.2.8.B.1** **M08.B-E.1.1** **M08.B-E.1.1.1**
Square and Cube Roots	**Worksheets**	**CC.2.2.8.B.1** **M08.B-E.1.1** **M08.B-E.1.1.2**
Solving Two Step Equations, variables on both sides with one or two variables	**Larson Pre-Algebra Chapter 3: 3.3**	**CC.2.2.8.B.3** **A1.1.2.1** **A1.1.2.1.1**
Solving Equations with one solution, no solution and infinitely many solutions	**Worksheets**	**CC.2.2.8.B.3** **M08.B-E.3.1** **M08.B-E.3.1.1**
Solving Equations with rational coefficients and expansion using distributive property and like terms	**Worksheets**	**CC.2.2.8.B.3** **M08.B-E.3.1** **M08.B-E.3.1.2**
Review and Final Exam		

General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Core Standards				
Add and Subtract Rational Numbers	**Standard - CC.2.1.7.E.1** Apply and extend previous understandings of operations with fractions to operations with rational numbers. **Anchor Descriptor - M07.A-N.1.1** Solve real-world and mathematical problems involving the four operations with rational numbers.	**Eligible Content -M07.A-N.1.1.1** Apply properties of operations to add and subtract rational numbers, including real-world **Vocabulary:** • Sum • Difference • Identity Property of Addition	**Approved textbook Big Ideas (Red)** www.bigideasmath.com **Big Ideas Red Chapter 1: 1.1, 1.2, 1.3** **Big Ideas Red Chapter 2: 2.2, 2.3**	**Teacher prepared tests, quizzes, etc.** **Series available assessments online. (Optional)**	5 days
Add/Subtract on Number Lines	**Standard - CC.2.1.7.E.1** Apply and extend previous understandings of operations with fractions to operations with rational numbers. **Anchor Descriptor - M07.A-N.1.1** Solve real-world and mathematical problems involving the four operations with rational numbers.	**Eligible Content -M07.A-N.1.1.2** Represent addition and subtraction on a horizontal or vertical number line.	**Big Ideas Red Chapter 2: 2.2**	**Teacher prepared tests, quizzes, etc.** **Series available assessments online. (Optional)**	1 day

Multiply/Divide Rational Numbers; repeating/ terminating decimals	Standard - CC.2.1.7.E.1 Apply and extend previous understandings of operations with fractions to operations with rational numbers. Anchor Descriptor - M07.A-N.1.1 Solve real-world and mathematical problems involving the four operations with rational numbers.	Eligible Content -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. Vocabulary: • Product • Quotient • Identity property of multiplication	Big Ideas Red Chapter 1: 1.1, 1.2, 1.3, 1.4, 1.5 Big Ideas Red Chapter 2: 2.1, 2.2, 2.3, 2.4	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	8 days
Unit Rates	Standard - CC.2.1.7.D.1 Analyze proportional relationships and use them to model and solve real-world and mathematical problems. Anchor Descriptor - M07.A-R.1.1 Analyze, recognize, and represent proportional relationships and use them to solve real-world and mathematical problems.	Eligible Content -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. Example: If a person walks 1/2 mile in each 1/4 hour, compute the unit rate as the complex fraction 1/2 / 1/4 miles per hour, equivalently 2 miles per hour. Vocabulary: • Complex Fractions	Big Ideas Red Chapter 5: 5.1	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	3 days

Proportions (including graphs and tables)	**Standard - CC.2.1.7.D.1 Analyze proportional relationships and use them to model and solve real-world and mathematical problems.** **Anchor Descriptor - M07.A-R.1.1 Analyze, recognize, and represent proportional relationships and use them to solve real-world and mathematical problems.**	**Eligible - Content 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).**	**Big Ideas Red Chapter 5: 5.2, extension 5.2, 5.6**	**Teacher prepared tests, quizzes, etc.** **Series available assessments online. (Optional)**	**4 days**
Constant of Proportionality	**Standard - CC.2.1.7.D.1 Analyze proportional relationships and use them to model and solve real-world and mathematical problems.** **Anchor Descriptor - M07.A-R.1.1 Analyze, recognize, and represent proportional relationships and use them to solve real-world and mathematical problems.**	**Eligible Content-M07.A-R.1.1.3 Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.** **Vocabulary:** • **Constant of Proportionality**	**Big Ideas Red Chapter 5: extension 5.2, 5.4, 5.5, 5.6**	**Teacher prepared tests, quizzes, etc.** **Series available assessments online. (Optional)**	**5 days**
Proportional Relationships with equations	**Standard - CC.2.1.7.D.1 Analyze proportional relationships and use them to model and solve real-world and mathematical problems.** **Anchor Descriptor - M07.A-**	**Eligible Content-M07.A-R.1.1.4 Represent proportional relationships by equations. Example: If total cost t is proportional to the number n of items purchased at a constant**	**Big Ideas Red Chapter 5: 5.3, 5.4, 5.6**	**Teacher prepared tests, quizzes, etc.** **Series available assessments online. (Optional)**	**3 days**

	R.1.1 Analyze, recognize, and represent proportional relationships and use them to solve real-world and mathematical problems.	price p, the relationship between the total cost and the number of items can be expressed as t = pn.			
Proportional Relationships with Graphs	**Standard - CC.2.1.7.D.1** Analyze proportional relationships and use them to model and solve real-world and mathematical problems. **Anchor Descriptor - M07.A-R.1.1** Analyze, recognize, and represent proportional relationships and use them to solve real-world and mathematical problems.	**Eligible Content-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.	**Big Ideas Red Chapter 5: extension 5.2, 5.6**	**Teacher prepared tests, quizzes, etc.** **Series available assessments online. (Optional)**	**2 days**
Multi-Step Proportional Relationships and Percent Problems	**Standard - CC.2.1.7.D.1** Analyze proportional relationships and use them to model and solve real-world and mathematical problems. **Anchor Descriptor - M07.A-R.1.1** Analyze, recognize, and represent proportional relationships and use them to solve real-world and mathematical problems.	**Eligible Content-M07.A-R.1.1.6** Use proportional relationships to solve multi-step ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease.	**Big Ideas Red Chapter 5: 5.1, 5.3** **Big Ideas Red Chapter 6: 6.3, 6.4, 6.5, 6.6, 6.7**	**Teacher prepared tests, quizzes, etc.** **Series available assessments online. (Optional)**	**14 days**

Simplifying Algebraic Expressions and Factoring	Standard - CC.2.2.7.B.1 Apply properties of operations to generate equivalent expressions. Anchor Descriptor - M07.B-E.1.1 Use properties of operations to generate equivalent expressions.	Eligible Content-M07.B-E.1.1.1 Apply properties of operations to add, subtract, factor, and expand linear expressions with rational coefficients. Example 1: The expression 1/2 • (x + 6) is equivalent to 1/2 • x + 3. Example 2: The expression 5.3 – y + 4.2 is equivalent to 9.5 – y (or –y + 9.5). Example 3: The expression 4w – 10 is equivalent to 2(2w – 5). Vocabulary: • Terms • Like terms • Factor • Constant	Big Ideas Red Chapter 3: 3.1, 3.2, extension 3.2	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	5 days
Estimation	Standard - CC.2.2.7.B.3 Model and solve real-world and mathematical problems by using and connecting numerical, algebraic, and/or graphical representations. Anchor Descriptor - A1.1.1.4 Use estimation strategies in problem-solving situations.	Eligible Content -A1.1.1.4.1 Use estimation to solve problems.	Worksheets	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	2 days

Multi-Step Real-World problems with Percents	**Standard - CC.2.2.7.B.3** Model and solve real-world and mathematical problems by using and connecting numerical, algebraic, and/or graphical representations. **Anchor Descriptor - M07.B-E.2.1** Solve multi-step real-world and mathematical problems posed with positive and negative rational numbers.	**Eligible Content-M07.B-E.2.1.1** Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate. 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 × $25 = $27.50).	**Big Ideas Red Chapter 6:** 6.1, 6.2, 6.4, 6.5	**Teacher prepared tests, quizzes, etc.** **Series available assessments online. (Optional)**	
Solve Word Problems with Equations	**Standard - CC.2.2.7.B.3** Model and solve real-world and mathematical problems by using and connecting numerical, algebraic, and/or graphical representations. **Anchor Descriptor - 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.	**Eligible Content -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. Example: The perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width? **Vocabulary:** • **Distributive property**	**Big Ideas Red Chapter 3:** 3.3, 3.4, 3.5	**Teacher prepared tests, quizzes, etc.** **Series available assessments online. (Optional)**	6 days

Solving Word Problems with Inequalities	Standard - CC.2.2.7.B.3 Model and solve real-world and mathematical problems by using and connecting numerical, algebraic, and/or graphical representations. Anchor Descriptor - 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.	Eligible Content -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. 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.	Big Ideas Red Chapter 4: 4.1, 4.2, 4.3, 4.4	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	8 days
Reasonableness of an Answer	Standard - CC.2.2.7.B.3 Model and solve real-world and mathematical problems by using and connecting numerical, algebraic, and/or graphical representations. Anchor Descriptor - M07.B-E.2.3 Determine the reasonableness of the answer(s) in problem solving situations.	Eligible Content -M07.B-E.2.3.1 Determine the reasonableness of answer(s) or interpret the solution(s) in the context of the problem. Example: If you want to place a towel bar that is 9 3/4 inches long in the center of a door that is 27 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.	Big Ideas Red Chapter 6: 6.1, 6.2, 6.4	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	3 days

Use equations to solve for angles	**Standard - CC.2.3.7.A.1** Solve real-world and mathematical problems involving angle measure, area, surface area, circumference, and volume. **Anchor Descriptor - M07.C-G.2.1** Identify, use, and describe properties of angles and their measures.	**Eligible Content -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. **Vocabulary:** • **Complementary angles** • **Supplementary angles**	**Big Ideas Red Chapter 7: 7.1, 7.2, extension 7.3**	**Teacher prepared tests, quizzes, etc.** **Series available assessments online. (Optional)**	**7 days**
Angle Properties	**Standard - CC.2.3.7.A.1** Solve real-world and mathematical problems involving angle measure, area, surface area, circumference, and volume. **Anchor Descriptor - M07.C-G.2.1** Identify, use, and describe properties of angles and their measures.	**Eligible Content -M07.C-G.2.1.2** Identify and use properties of angles formed when two parallel lines are cut by a transversal **Vocabulary:** • **Alternate Exterior Angles** • **Alternate Interior Angles** • **Corresponding Angles** • **Vertical Angles** • **Transversals**	**Worksheets**	**Teacher prepared tests, quizzes, etc.** **Series available assessments online. (Optional)**	**3 days**

Circles	Standard - CC.2.3.7.A.1 Solve real-world and mathematical problems involving angle measure, area, surface area, circumference, and volume. Anchor Descriptor - M07.C-G.2.2 Determine circumference, area, surface area, and volume.	Eligible Content -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. Vocabulary: • Circle • Circumference	Big Ideas Red Chapter 8: 8.1, 8.2, 8.3, 8.4	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	11 days
Real-world problems involving area, volume and surface area	Standard - CC.2.3.7.A.1 Solve real-world and mathematical problems involving angle measure, area, surface area, circumference, and volume. Anchor Descriptor - M07.C-G.2.2 Determine circumference, area, surface area, and volume.	Eligible Content -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. Vocabulary: • Cubes • Pyramid • Area • Volume • Surface Area • Right Prisms	Big Ideas Red Chapter 8: 8.4, 9.1, Big Ideas Red Chapter 9: 9.2, 9.4, 9.5	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	15 days

Scale Drawings	Standard - CC.2.3.7.A.2 Visualize and represent geometric figures and describe the relationships between them. Anchor Descriptor - M07.C-G.1.1 Describe and apply properties of geometric figures.	Eligible Content -M07.C-G.1.1.1 Solve problems involving scale drawings of geometric figures, including finding length and area. Vocabulary: • Scale Drawings • Scale Factor	Big Ideas Red Chapter 7: 7.5	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	3 days
Types of Triangles	Standard - CC.2.3.7.A.2 Visualize and represent geometric figures and describe the relationships between them. Anchor Descriptor - M07.C-G.1.1 Describe and apply properties of geometric figures.	Eligible Content -M07.C-G.1.1.2 Identify or describe the properties of all types of triangles based on angle and side measures. Vocabulary: • Scalene • Isosceles • Equilateral • Acute • Right • Obtuse	Big Ideas Red Chapter 7: 7.3	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	2 days
Triangle Inequality Theorem	Standard - CC.2.3.7.A.2 Visualize and represent geometric figures and describe the relationships between them. Anchor Descriptor - M07.C-G.1.1 Describe and apply properties of geometric figures.	Eligible Content- M07.C-G.1.1.3 Use and apply the triangle inequality theorem. Vocabulary: • Triangle Inequality Theorem	Worksheets	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	1 day

Cross Sections	Standard - CC.2.3.7.A.2 Visualize and represent geometric figures and describe the relationships between them. Anchor Descriptor - M07.C-G.1.1 Describe and apply properties of geometric figures.	Eligible Content -M07.C-G.1.1.4 Describe the two-dimensional figures that result from slicing three-dimensional figures. Example: Describe plane sections of right rectangular prisms and right rectangular pyramids.	Big Ideas Red Chapter 9: 9.5	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	1 day
Random sampling and valid inferences	Standard - CC.2.4.7.B.1 Draw inferences about populations based on random sampling concepts. Anchor Descriptor - M07.D-S.1.1 Use random samples.	Eligible Content -M07.D-S.1.1.1 Determine whether a sample is a random sample given a real-world situation. Vocabulary: • Chance Event(Random Event)	Big Ideas Red Chapter 10: 10.6	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	3 days
Predictions	Standard - CC.2.4.7.B.1 Draw inferences about populations based on random sampling concepts. Anchor Descriptor - M07.D-S.1.1 Use random samples.	Eligible Content -M07.D-S.1.1.2 Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Example 1: Estimate the mean word length in a book by randomly sampling words from the book. Example 2: Predict the winner of a school election based on randomly sampled survey data.	Big Ideas Red Chapter 10: 10.6, extension 10.6	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	1 day

Absolute Deviation and Measures of Central Tendency	Standard-CC.2.4.7.B.2 Draw informal comparative inferences about two populations. Anchor Descriptor - M07.D-S.2.1 Use statistical measures to compare two numerical data distributions.	Eligible Content -M07.D-S.2.1.1 Compare two numerical data distributions using measures of center and variability. 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. 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.	Big Ideas Red Chapter 10: 10.7	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	3 days
Compound Events	Standard - CC.2.4.7.B.3 Investigate chance processes and develop, use, and evaluate probability models. Anchor Descriptor - A1.2.3.3 Apply probability to practical situations.	Eligible Content-A1.2.3.3.1 Find probabilities for compound events (e.g., find probability of red and blue, find probability of red or blue) and represent as a fraction, decimal, or percent. Vocabulary: • Compound Events	Big Ideas Red Chapter 10: 10.4	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	3 days

Probability	Standard - CC.2.4.7.B.3 Investigate chance processes and develop, use, and evaluate probability models. Anchor Descriptor - M07.D-S.3.1 Predict or determine the likelihood of outcomes.	Eligible Content -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 neither unlikely nor likely, and a probability near 1 indicates a likely event).	Big Ideas Red Chapter 10: 10.1, 10.2, 10.3	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	8 days
Experimental and Theoretical Probability	Standard - CC.2.4.7.B.3 Investigate chance processes and develop, use, and evaluate probability models. Anchor Descriptor - M07.D-S.3.2 Use probability to predict outcomes.	Eligible Content-M07.D-S.3.2.1 Determine the probability of a chance event given relative frequency. Predict the approximate relative frequency given the probability. 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.	Big Ideas Red Chapter 10: 10.3	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	3 days
Simple Events	Standard - CC.2.4.7.B.3 Investigate chance processes and develop, use, and evaluate probability models. Anchor Descriptor - M07.D-S.3.2 Use probability to predict outcomes.	Eligible Content-M07.D-S.3.2.2 Find the probability of a simple event, including the probability of a simple event not occurring. Example: What is the probability of not rolling a 1 on a number cube?	Big Ideas Red Chapter 10: 10.1	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	3 days

Compound Events, Sample Spaces, Simulations	Standard - CC.2.4.7.B.3 Investigate chance processes and develop, use, and evaluate probability models. Anchor Descriptor - M07.D-S.3.2 Use probability to predict outcomes.	Eligible Content M07.D-S.3.2.3 Find probabilities of independent compound events using organized lists, tables, tree diagrams, and simulation. Vocabulary: • **Compound Events** • **Dependent Events** • **Independent Events**	Big Ideas Red Chapter 10: 10.4, 10.5, extension 10.5	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	8 days
Simplify expressions with Exponents	Standard - CC.2.2.8.B.1 Apply concepts of radicals and integer exponents to generate equivalent expressions. Anchor Descriptor- A1.1.1.3 Use exponents, roots and/or absolute value to solve problems.	Eligible Content - A1.1.1.3.1 Simplify/evaluate expressions involving properties/laws of exponents, roots and/or absolute value to solve problems (exponents should be integers from -10 to 10).	Larson Pre-Algebra Chapter 4: 4.5, 4.6	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	4 days
Equivalent Expressions with Radicals and Integer Exponents	Standard - CC.2.2.8.B.1 Apply concepts of radicals and integer exponents to generate equivalent expressions. Anchor Descriptor-M08.B-E.1.1 Represent and use expressions and equations to solve problems involving radicals and integer exponents.	Eligible Content - M08.B-E.1.1.1 Apply one or more properties of integer exponents to generate equivalent numerical expressions without a calculator (with final answers expressed in exponential form with positive exponents). Properties will be provided. Example: $3^{12} \times 3^{-15} = 3^{-3} = 1/(3^3)$	Larson Pre-Algebra Chapter 4: 4.5, 4.6	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	4 days

Square and Cube Roots	Standard - CC.2.2.8.B.1 Apply concepts of radicals and integer exponents to generate equivalent expressions. Anchor Descriptor-M08.B-E.1.1 Represent and use expressions and equations to solve problems involving radicals and integer exponents.	Eligible Content - M08.B-E.1.1.2 Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of perfect squares (up to and including 12^2) and cube roots of perfect cubes (up to and including 5^3) without a calculator. Example: If $x^2 = 25$ then $x = \pm\sqrt{25}$.	Worksheets	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	4 days
Solving Two Step Equations, variables on both sides with one or two variables	Standard - CC.2.2.8.B.3 Analyze and solve linear equations and pairs of simultaneous linear equations. Anchor Descriptor- A1.1.2.1 Write, solve and/or graph linear equations and inequalities using various methods.	Eligible Content - A1.1.2.1.1 Write, solve and/or apply a linear equation (including problem situations).	Larson Pre-Algebra Chapter 3: 3.3	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	5 days
Solving Equations with one solution, no solution and infinitely many solutions	Standard - CC.2.2.8.B.3 Analyze and solve linear equations and pairs of simultaneous linear equations. Anchor Descriptor-M08.B-E.3.1 Write, solve, graph and	Eligible Content - M08.B-E.3.1.1 Write and identify linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively	Worksheets	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	4 days

	interpret linear equations in one or two variables, using various methods.	transforming the given equation into simpler forms until an equivalent equation of the form x = a, a = a, or a = b results (where a and b are different numbers).			
Solving Equations with rational coefficients and expansion using distributive property and like terms	**Standard - CC.2.2.8.B.3 Analyze and solve linear equations and pairs of simultaneous linear equations.** **Anchor Descriptor-M08.B-E.3.1 Write, solve, graph and interpret linear equations in one or two variables, using various methods.**	**E.3.1.2 Solve linear equations that have rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.**	**Worksheets**	**Teacher prepared tests, quizzes, etc.** **Series available assessments online. (Optional)**	**8 days**
Review and Final Exam					**7 days**