



Pre-Algebra

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CHAPTER/LESSON TITLES	GRADE-LEVEL EXPECTATIONS
Unit 1 Rational Numbers and Equations	
Chapter 1 The Tools of Algebra	
1-1 Words and Expressions	M8.A.1 Numbers and Operations M8.A.2.1.1 M8.D.1 Algebraic Concepts M8.D.1.1.1, M8.D.1.1.2, M8.D.2.2.1
1-2 Variables and Expressions	M8.D.1 Algebraic Concepts M8.D.1.1.2, M8.D.2.1.3, M8.D.2.2.1
1-3 Properties	M8.A.1 Numbers and Operations M8.A.2.11 M8.D.1 Algebraic Concepts M8.D.2.1.3, M8.D.2.2.1
1-4 Ordered Pairs and Relations	M8.C.1 Geometry M8.C.3.1.1 M8.D.1 Algebraic Concepts M8.D.1.1.1, M8.D.1.1.2

CHAPTER/LESSON TITLES	GRADE-LEVEL EXPECTATIONS
1-5 Words, Equations, Tables, and Graphs	M8.D.1 Algebraic Concepts M8.D.1.1.2, M8.D.1.1.3, M8.D.2.2.1
1-6 Scatter Plots	M8.E.1 Data Analysis M8.E.1.1.1, M8.E.4.1.1, M8.E.4.1.2
Chapter 2 Operations with Integers	
2-1 Integers and Absolute Value	There are no state-mandated assessment anchors for this topic.
2-2 Adding Integers	M8.A.1 Numbers and Operations M8.A.3.3.1 M8.D.1 Algebraic Concepts M8.D.2.2.2
2-3 Subtracting Integers	M8.A.1 Numbers and Operations M8.A.3.3.1 M8.D.1 Algebraic Concepts M8.A.2.1.3
2-4 Multiplying Integers	M8.A.1 Numbers and Operations M8.A.3.3.1 M8.D.1 Algebraic Concepts M8.D.2.1.3
2-5 Dividing Integers	M8.A.1 Numbers and Operations M8.A.3.3.1 M8.D.1 Algebraic Concepts M8.D.2.1.3
2-6 Graphing in Four Quadrants	M8.C.1 Geometry M8.C.3.1.1
2-7 Translations and Reflections on the Coordinate Plane	M8.C.1 Geometry M8.C.3.1.1
Chapter 3 Operations with Rational Numbers	
3-1 Fractions and Decimals	There are no state-mandated assessment anchors for this topic.
3-2 Rational Numbers	There are no state-mandated assessment anchors for this topic.
3-3 Multiplying Rational Numbers	M8.A.1 Numbers and Operations M8.A.3.1.2, M8.A.3.3.1
3-4 Dividing Rational Numbers	M8.A.1 Numbers and Operations M8.A.2.2.2, M8.A.3.3.1

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3-5 Adding and Subtracting Like Fractions	M8.A.1 Numbers and Operations M8.A.3.1.2, M8.A.3.3.1
3-6 Adding and Subtracting Unlike Fractions	M8.A.1 Numbers and Operations M8.A.3.1.2, M8.A.3.3.1
Chapter 4 Expressions and Equations	
4-1 The Distributive Property	M8.D.1 Algebraic Concepts M8.D.2.1.3
4-2 Simplifying Algebraic Expressions	M8.D.1 Algebraic Concepts M8.D.2.1.3
4-3 Solving Equations by Adding or Subtracting	M8.D.1 Algebraic Concepts M8.D.2.1.1, M8.D.2.1.2, M8.D.2.2.1, M8.D.2.2.2
4-4 Solving Equations by Multiplying or Dividing	M8.D.1 Algebraic Concepts M8.D.2.1.1, M8.D.2.1.1, M8.D.2.2.2
4-5 Solving Two-Step Equations	M8.D.1 Algebraic Concepts M8.D.2.1.1, M8.D.2.1.1, M8.D.2.2.2
4-6 Writing Equations	M8.D.1 Algebraic Concepts M8.D.2.2.2
Chapter 5 Multi-Step Equations and Inequalities	
5-1 Perimeter and Area	There are no state-mandated assessment anchors for this topic.
5-2 Solving Equations with Variables on Each Side	M8.D.1 Algebraic Concepts M8.D.2.2.2
5-3 Inequalities	M8.D.1 Algebraic Concepts M8.D.2.2.1
5-4 Solving Inequalities	M8.D.1 Algebraic Concepts M8.D.2.1.1, M8.D.2.2.1
5-5 Solving Multi-Step Equations and Inequalities	M8.B.1 Measurement M8.B.1.1.4 M8.D.1 Algebraic Concepts M8.D.2.1.1, M8.D.2.2.1
Unit 2 Proportions and Similarity	
Chapter 6 Ratio, Proportion, and Similar Figures	
6-1 Ratios	There are no state-mandated assessment anchors for this topic.

CHAPTER/LESSON TITLES	GRADE-LEVEL EXPECTATIONS
6-2 Unit Rates	M8.A.1 Numbers and Operations M8.A.2.2.2, M8.A.3.1.1, M8.A.3.1.2
6-3 Converting Rates and Measurements	M8.B.1 Measurements M8.B.1.1.1, M8.B.1.1.2, M8.B.1.1.3
6-4 Proportional and Nonproportional Relationships	There are no state-mandated assessment anchors for this topic.
6-5 Solving Proportions	There are no state-mandated assessment anchors for this topic.
6-6 Scale Drawings and Models	There are no state-mandated assessment anchors for this topic.
6-7 Similar Figures	There are no state-mandated assessment anchors for this topic.
6-8 Dilations	M8.C.1 Geometry M8.C.3.1.1
6-9 Indirect Measurement	There are no state-mandated assessment anchors for this topic.
Chapter 7 Percent	
7-1 Fractions and Percents	M8.A.1 Numbers and Operations M8.A.2.2.1, M8.A.3.1.1, M8.A.3.2.1 M8.E.1 Data Analysis and Probability M8.E.1.1.2
7-2 Fractions, Decimals, and Percents	M8.A.1 Numbers and Operations M8.A.3.1.1, M8.A.3.1.2, M8.A.3.2.1
7-3 Using the Percent Proportion	M8.A.1 Numbers and Operations M8.A.2.2.1, M8.A.3.1.1 M8.E.1 Data Analysis and Probability M8E.1.1.2, M8.E.4.1.2
7-4 Find Percent of a Number Mentally	M8.A.1 Numbers and Operations M8.A.2.2.1, M8.A.2.2.2, M8.A.3.1.2, M8.A.3.2.1
7-5 Using Percent Equations	M8.A.1 Numbers and Operations M8.A.2.2.1, M8.A.3.1.2, M8.A.3.2.1
7-6 Percent of Change	There are no state-mandated assessment anchors for this topic.
7-7 Simple and Compound Interest	M8.A.1 Numbers and Operations M8.A.2.2.2

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7-8 Circle Graphs	M8.A.1 Numbers and Operations M8.A.3.2.1 M8.E.1 Data Analysis and Probability M8.E.1.1.1, M8.E.1.1.2
Unit 3 Linear and Nonlinear Functions	
Chapter 8 Linear Functions and Graphing	
8-1 Functions	M8.D.1 Algebraic Concepts M8.D.1.1.1, M8.D.1.1.2, M8.D.1.1.3
8-2 Sequences and Equations	M8.D.1 Algebraic Concepts M8.D.1.1.1, M8.D.1.1.2
8-3 Representing Linear Functions	M8.D.1 Algebraic Concepts M8.D.1.1.3, M8.D.4.1.1
8-4 Rate of Change	M8.D.1 Algebraic Concepts M8.D.1.1.3, M8.D.4.1.1
8-5 Constant Rate of Change and Direct Variation	M8.D.1 Algebraic Concepts M8.D.4.1.1
8-6 Slope	There are no state-mandated assessment anchors for this topic.
8-7 Slope-Intercept Form	M8.D.1 Algebraic Concepts M8.D.4.1.3
8-8 Writing Linear Equations	M8.D.1 Algebraic Concepts M8.D.4.1.3
8-9 Prediction Equations	M8.E.1 Data Analysis and Probability M8.E.4.1.1, M8.E.4.1.2
8-10 Systems of Equations	M8.D.1 Algebraic Concepts M8.D.4.1.3
Chapter 9 Powers and Nonlinear Functions	
9-1 Powers and Exponents	M8.A.1 Numbers and Operations M8.A.1.1.1, M8.D.1.1.1
9-2 Prime Factorization	M8.B.1 Measurements M8.B.2.2.1
9-3 Multiplying and Dividing Monomials	There are no state-mandated assessment anchors for this topic.

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9-4 Negative Exponents	M8.A.1 Numbers and Operations M8.A.1.1.1
9-5 Scientific Notation	M8.A.1 Numbers and Operations M8.A.1.1.1
9-6 Powers of Monomials	M8.A.1 Numbers and Operations M8.A.1.1.1 M8.B.1 Measurements M8.B.2.2.2
9-7 Linear and Nonlinear Functions	M8.D.1 Algebraic Concepts M8.D.1.1.3
9-8 Quadratic Functions	There are no state-mandated assessment anchors for this topic.
9-9 Cubic and Exponential Functions	M8.A.1 Numbers and Operations M8.A.1.1.1
Unit 4 Two- and Three-Dimensional Space	
Chapter 10 Real Numbers and Right Triangles	
10-1 Squares and Square Roots	M8.A.1 Numbers and Operations M8.A.1.1.2
10-2 The Real Number System	There are no state-mandated assessment anchors for this topic.
10-3 Triangles	There are no state-mandated assessment anchors for this topic.
10-4 The Pythagorean Theorem	M8.C.1 Geometry M8.C.1.2.1
10-5 The Distance Formula	M8.A.1 Numbers and Operations M8.C.1.2.1
10-6 Special Right Triangles	There are no state-mandated assessment anchors for this topic.
Chapter 11 Distance and Angle	
11-1 Angle and Line Relationships	M8.C.1 Geometry M8.C.1.1.2, M8.C.1.1.3
11-2 Congruent Triangles	There are no state-mandated assessment anchors for this topic.
11-3 Rotations	There are no state-mandated assessment anchors for this topic.

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11-4 Quadrilaterals	There are no state-mandated assessment anchors for this topic.
11-5 Polygons	M8.B.1 Measurements M8.B.1.1.1, M8.B.1.1.2, M8.B.2.1.3
11-6 Area of Parallelograms, Triangles, and Trapezoids	There are no state-mandated assessment anchors for this topic.
11-7 Circles and Circumference	There are no state-mandated assessment anchors for this topic.
11-8 Area of Circles	There are no state-mandated assessment anchors for this topic.
11-9 Area of Composite Figures	There are no state-mandated assessment anchors for this topic.
Chapter 12 Surface Area and Volume	
12-1 Three-Dimensional Figures	There are no state-mandated assessment anchors for this topic.
12-2 Volume of Prisms	M8.B.1 Measurements M8.B.2.2.2
12-3 Volume of Cylinders	There are no state-mandated assessment anchors for this topic.
12-4 Volume of Pyramids, Cones, and Spheres	There are no state-mandated assessment anchors for this topic.
12-5 Surface Area of Prisms	M8.B.1 Measurements M8.B.2.2.1 M8.C.1 Geometry M8.C.1.1.1
12-6 Surface Area of Cylinders	M8.C.1 Geometry M8.C.1.1.1
12-7 Surface Area of Pyramids and Cones	M8.C.1 Geometry M8.C.1.1.1
12-8 Similar Solids	There are no state-mandated assessment anchors for this topic.
Unit 5 Data Sets	
Chapter 13 Statistics and Probability	
13-1 Measures of Central Tendency	There are no state-mandated assessment anchors for this topic.

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13-2 Stem-and-Leaf Plots	M8.E.1 Data Analysis and Probability M8.E.1.1.1, M8.E.1.1.3
13-3 Measure of Variation	There are no state-mandated assessment anchors for this topic.
13-4 Box-and-Whisker Plots	M8.E.1 Data Analysis and Probability M8.E.1.1.1, M8.E.1.1.3
13-5 Histograms	M8.E.1 Data Analysis and Probability M8.E.1.1.1, M8.E.1.1.2
13-6 Theoretical and Experimental Probability	M8.E.1 Data Analysis and Probability M8.E.4.1.2
13-7 Using Sampling to Predict	There are no state-mandated assessment anchors for this topic.
13-8 Counting Outcomes	There are no state-mandated assessment anchors for this topic.
13-9 Permutations and Combinations	M8.E.1 Data Analysis and Probability M8.E.3.2.1
13-10 Probability of Compound Events	M8.E.1 Data Analysis and Probability M8.E.3.1.1