



All Dimensions Math 8 lessons are considered essential and are important to teach at this grade level based on the Dimensions Math sequence, Common Core State Standards, mastery of prerequisite skills, and readiness for a Geometry or Algebra 2 course. For students who have successfully completed Dimensions Math 7, the Notes section identifies lessons in Dimensions Math 8 that may be omitted, accelerated through, or used as review.

This Pacing Guide focuses on content from the Textbook. The Workbook exercises are for additional practice. The Basic Practice and Further Practice sections in the Workbook may also serve as a source of assessment problems.

Dimensions Math 8 provides opportunities for students to apply their learning through higher-level thinking and enrichment problems. These include the BrainWorks and Extend Your Learning Curve problems in the Textbook, as well as the Challenging Practice and Enrichment problems in the Workbook. While these problems are not considered essential and are not included in this Pacing Guide, they are worth exploring to deepen problem-solving skills and practice higher-order thinking.

This Guide also highlights Algebra 1 content in Dimensions Math 8. Students who demonstrate a high level of mastery in Dimensions Math 6, 7, and 8 will be prepared to enter a Geometry or Algebra 2 course following Dimensions Math 8. Pre-algebra, Algebra, and Geometry readiness skills are integrated throughout the Dimensions Math 6 to 8 sequence.

For more detailed information on state standards alignment, refer to the [Dimensions Math 6-8 Common Core Alignments](#).

For a more in-depth look at what is covered in each chapter, refer to the [Dimensions Math 6-8 Scopes and Sequences](#).



Chapter 1: Exponents and Scientific Notation	Pacing	Class Periods	Pre-algebra Content	Notes
1.1 Positive Exponents and the Laws of Exponents	Month 1	15 – 17	1.1 1.2 1.3 1.5	Content meets or exceeds Common Core State Standards for Math for Grade 8.
1.2 Zero and Negative Integer Exponents				
1.3 Fractional Exponents				
1.4 Comparing Exponents				
1.5 Scientific Notation				
1.6 Rounding Numbers to a Specified Number of Significant Figures				
1.7 Estimations and Accuracy of Calculators				
Review Exercise 1				



Chapter 2: Linear Equations in Two Variables	Pacing	Class Periods	Algebra Content	Notes
2.1 Linear Equations in Two Variables	Month 2	11 – 13	All	Content meets or exceeds Common Core State Standards for Math for Grade 8.
2.2 Solving Simultaneous Linear Equations in Two Variables using the Graphical Method				
2.3 Solving Simultaneous Linear Equations in Two Variables using the Substitution Method				
2.4 Solving Simultaneous Linear Equations in Two Variables using the Elimination Method				
2.5 Solving Problems using Simultaneous Equations				
Review Exercise 2				

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Chapter 3: Expansion of Algebraic Expressions	Pacing	Class Periods	Algebra Content	Notes
3.1 Expansion of the Products of Algebraic Expressions 3.2 Special Products of Algebraic Expressions 3.3 Factorization by using Special Products of Algebraic Expressions Review Exercise 3	Months 2 – 3	7 – 9	All	<p>This chapter focuses on special products and factorization, including the difference of squares and perfect square trinomials, and provides foundational skills for future work with polynomials.</p> <p>Content meets or exceeds Common Core State Standards for Math for Grade 8.</p>

Chapter 4: Quadratic Factorization and Equations	Pacing	Class Periods	Algebra Content	Notes
4.1 Factorization of $ax^2 + bx + c$ 4.2 Solving Quadratic Equations by Factorization 4.3 Problem Solving involving Quadratic Equations Review Exercise 4 Review Exercise 4	Month 3	7 – 9	All	<p>Content meets or exceeds Common Core State Standards for Math for Grade 8.</p>



Chapter 5: Simple Algebraic Fractions	Pacing	Class Periods	Algebra Content	Notes
5.1 Simplifying Simple Algebraic Fractions 5.2 Multiplication and Division of Algebraic Fractions 5.3 Addition and Subtraction of Algebraic Fractions 5.4 Fractional Equations 5.5 More about Formulas Review Exercise 5	Month 3 – 4	13 - 15	All	Content meets or exceeds Common Core State Standards for Math for Grade 8.

Chapter 6: Congruence and Similarity	Pacing	Class Periods	Algebra Content	Notes
6.1 Congruence and Reflections 6.2 Translations, Rotations and Combining Transformations 6.3 Similarity 6.4 Enlargements and Similarity Review Exercise 6	Months 4 – 5	13 – 15	None	Content is typically considered Geometry, but may be found in an Algebra 1 course. GeoGebra, a free, web-based tool can be used as a replacement for Geometer's Sketchpad. Content meets or exceeds Common Core State Standards for Math for Grade 8.



Chapter 7: Parallel Lines and Angles in Triangles and Polygons	Pacing	Class Periods	Algebra Content	Notes
7.1 Angles formed by Parallel Lines and Transversals 7.2 Interior and Exterior Angles of a Triangle 7.3 Angle Properties of Special Quadrilaterals 7.4 Polygons Review Exercise 7	Month 5	11 - 13	None	<p>If students mastered content from DM 7A and have demonstrated an understanding of angles, triangles, and quadrilaterals, Chapter 7 could be omitted, accelerated through, or used as review.</p> <p>Content is typically considered Pre-algebra or Geometry, but may be found in an Algebra 1 course.</p> <p>GeoGebra, a free, web-based tool can be used as a replacement for Geometer's Sketchpad.</p> <p>Content meets or exceeds Common Core State Standards for Math for Grade 8.</p>



Chapter 8: Graphs of Linear and Quadratic Functions	Pacing	Class Periods	Algebra Content	Notes
8.1 Linear Functions 8.2 Graphs of Quadratic Functions Review Exercise 8	Month 6	9 – 11	All	<p>In this chapter, functions are represented using y rather than formal function notation $f(x)$. Teachers may optionally introduce $f(x)$ to emphasize that a function represents a rule that can be named, analyzed, and compared across representations. For example, the equation $y = 2x + 3$ can also be written as $f(x) = 2x + 3$. While both represent the same output, $f(x)$ highlights the function itself as an object that can be discussed and compared.</p> <p>Content meets or exceeds Common Core State Standards for Math for Grade 8.</p>



Chapter 9: Graphs and Practical Situations	Pacing	Class Periods	Algebra Content	Notes
9.1 Tables, Charts, and Graphs 9.2 Distance-Time Graphs Review Exercise 9	Month 6	6 - 8	None	Content is typically considered Pre-algebra. Content meets Common Core State Standards for Math for Grade 8.

Chapter 10: Pythagorean Theorem	Pacing	Class Periods	Algebra Content	Notes
10.1 Pythagorean Theorem 10.2 The Converse of Pythagorean Theorem 10.3 Applications of Pythagorean Theorem Review Exercise 10	Months 7 - 8	9 - 11	All	Content is typically considered Geometry, but may be found in an Algebra 1 course. Content meets or exceeds Common Core State Standards for Math for Grade 8.

Chapter 11: Coordinate Geometry	Pacing	Class Periods	Algebra Content	Notes
11.1 Distance Between Two Points 11.2 Slope of a Straight Line 11.3 Equation of a Straight Line Review Exercise 11	Months 7 - 8	9 - 11	All	Content meets or exceeds Common Core State Standards for Math for Grade 8.



Chapter 12: Mensuration of Pyramids, Cylinders, Cones and Spheres	Pacing	Class Periods	Algebra Content	Notes
12.1 Pyramids	Month 8	13 - 15	None	Content is typically considered Statistics, but may be found in an Algebra 1 course.
12.2 Cylinders				
12.3 Cones				
12.4 Spheres				Content meets or exceeds Common Core State Standards for Math for Grade 8.
Review Exercise 12				

Chapter 13: Data Analysis	Pacing	Class Periods	Algebra Content	Notes
13.1 Volumes and Total Surface Areas of a Cube and a Cuboid	Months 8 - 9	10 - 12	All	Content is typically considered Statistics, but may be found in an Algebra 1 course.
13.2 Volume and Total Surface Area of a Prism				
13.3 Volumes and Surface Areas of Composite Solids				Content meets or exceeds Common Core State Standards for Math for Grade 8.
Review Exercise 13				



Chapter 14: More About Quadratic Equations	Pacing	Class Periods	Algebra Content	Notes
14.1 Solving Quadratic Equations by Factorization 14.2 Completing the Square Method 14.3 Quadratic Formula 14.4 Graphical Method 14.5 Applications of Quadratic Equations Review Exercise 14	Month 9	10 - 12	All	Content meets or exceeds Common Core State Standards for Math for Grade 8.