

HMH Into Math[®]

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Grades 6–Algebra 1



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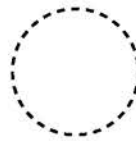
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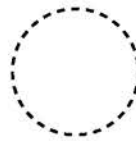
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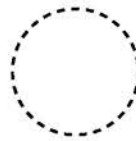
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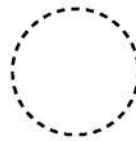
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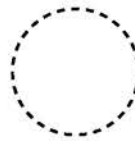
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- identify systems of equations with no solution or infinitely many solutions.
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- describe the effect of a translation, reflection, or rotation on a figure.
- use transformations to determine if two figures are congruent.

World of Math	236
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- use angle relationships in triangles and parallel lines cut by a transversal.

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Prerequisite Check	6
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- write an equation given a verbal description, table, or graph.
- compare functions represented in different forms.

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- find an equation of a function that models data shown in a scatter plot.

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- use linear functions fitted to data to make predictions.
- interpret the slope and y-intercept of a linear function.



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- construct and interpret two-way frequency tables.
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- analyze and solve problems involving categorical data.
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- use spreadsheets to analyze data sets.



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GRADE 8

Book 2 Module 13

Module 13 Cylinders, Cones, and Spheres ... 234

In this module, you will learn how to . . .

- find the volume of cylinders, cones, and spheres.
- find the surface area of cylinders, cones, and spheres.

World of Math	236
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13.1 Volume of Cylinders <small>MP 6, 7</small>	239
13.2 Volume of Cones <small>MP 7</small>	247
13.3 Volume of Spheres <small>MP 6</small>	253
13.4 Surface Area of Cylinders, Cones, and Spheres <small>MP 1, 4</small>	259
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Book 2 Module 14

Module 14 Analyze and Apply Volume and Surface Area 270



In this module, you will learn how to . . .

- compare formulas for volume and surface area of solids.
- solve real-world problems involving volume.
- find and interpret ratios of surface area to volume.

World of Math	272
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MP 1, 3	
Module Review	301



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Algebra 1

Book 1 Module 1

Book 1 Contents

Module 1 Foundations for Algebra 2

In this module, you will learn how to . . .

- explain properties of rational and irrational numbers.
- report quantities with accuracy and an appropriate level of precision.
- use expressions, equations, inequalities, functions, and graphs.

World of Math 4

Prerequisite Check 6

1.1 Real Numbers 7

MP 1, 3, 7

1.2 Precision and Accuracy in Calculations 19

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1.3 Expressions, Equations, and Inequalities 31

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1.4 Functions and Graphs 43

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Module Review 53

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Book 1 Module 2

Module 2

Linear and Absolute Value Equations and Inequalities 56



In this module, you will learn how to . . .

- use properties to solve linear equations and inequalities.
- solve for a variable in linear equations.
- solve absolute value equations and inequalities.

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2.2 Rewrite Formulas and Solve Literal Equations	73
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Book 1 Module 3

Module 3 Linear Equations and Inequalities in Two Variables 108

In this module, you will learn how to . . .

- write and graph different forms of linear equations in two variables.
- write and graph linear inequalities in two variables.
- use linear equations and inequalities in two variables to solve problems.

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Book 1 Module 4

Module 4 **Linear Systems**166

In this module, you will learn how to . . .

- solve systems of linear equations by graphing, substitution, and elimination.
- graph systems of linear inequalities.
- use systems of linear equations and inequalities to solve problems.



World of Math	168
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 2, 4	
Module Review	217



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Book 1 Module 5

Module 5

Quadratic Equations and Systems

220

In this module, you will learn how to . . .

- solve equations using graphs, tables, and successive approximations.
- solve quadratic equations using a variety of algebraic methods.
- solve linear-quadratic systems.

World of Math 222

Prerequisite Check 224

5.1 Solve Equations Using Graphs, Tables, and Successive Approximations 225

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5.2 Multiply Binomials 239

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MP 5, 6

Module Review 339

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Book 1 Module 6

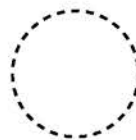
Module 6 **Function Concepts** 342

In this module, you will learn how to . . .

- determine if a given relation is a function.
- identify characteristics of functions, transform functions, and find inverses.
- understand that functions can be used to model data.



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Book 2 Module 7

Book 2 Contents

Module 7 Families of Functions 2

In this module, you will learn how to . . .

- understand that there are different types (families) of functions.
- graph, compare, and apply functions in different families.
- simplify expressions involving rational exponents and radicals.

World of Math 4

Prerequisite Check 6

7.1 Linear Functions 7

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7.2 Absolute Value Functions 25

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7.5 Exponential Functions 67

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7.6 Quadratic Functions 85

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Book 2 Module 8

Module 8 Discrete Functions 104

In this module, you will learn how to . . .

- understand the difference between arithmetic and geometric sequences.
- write and apply recursive and explicit rules for arithmetic sequences.
- write and apply recursive and explicit rules for geometric sequences.



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Book 2 Module 9

Module 9

Bivariate Data and Linear Models 164

In this module, you will learn how to . . .

- fit a linear function to data and use the function to make predictions.
- represent bivariate categorical data using two-way tables.
- use two-way tables to identify associations between variables.

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Prerequisite Check 168

9.1 Bivariate Numerical Data, Correlation, and Fitted Lines 169
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9.2 Residuals and Best-Fit Lines 185
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9.3 Bivariate Categorical Data and Two-Way Tables 199
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Book 2 Module 10

Module 10 Nonlinear Models for Data 228

In this module, you will learn how to . . .

- fit exponential functions to data.
- fit quadratic functions to data.
- determine if a data set is best modeled by a linear, exponential, or quadratic function.



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Book 2 Module 11

Module 11 Features of Functions 278

In this module, you will learn how to . . .

- use properties of exponents to rewrite exponential functions.
- rewrite quadratic functions to identify zeros and extreme values.
- write and apply rules for sequences that are not arithmetic or geometric.

World of Math 280

Prerequisite Check 282

11.1 Rewrite Exponential Functions to Reveal Features 283

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Book 2 Module 12

Module 12 Growth, Decay, and Function Operations 328

In this module, you will learn how to . . .

- compare growth and decay of different types of functions.
- add, subtract, and multiply polynomials.
- perform operations with functions, and apply inverses of functions.



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Book 2 Module 13

Module 13 Data Distributions 412

In this module, you will learn how to . . .

- choose appropriate measures of center and spread for data distributions.
- use measures of center and spread to compare data distributions.
- solve problems involving univariate and bivariate numerical data.

World of Math 414

Prerequisite Check 416

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13.2 Compare Data Distributions 431

MP 3, 4, 5

13.3 Statistical Problem Solving 445

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