



## CURRICULUM CATALOG

# Mathematics 700

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## Mathematics 700 Course Overview

Mathematics 700 is designed to prepare junior-high students for Pre-algebra. This course focuses on strengthening needed skills in problem solving, number sense, and proportional reasoning. It also introduces students to integers, equations, and geometric concepts. Students will begin to see the "big picture" of mathematics and learn how numeric, algebraic, and geometric concepts are woven together to build a foundation for higher mathematical thinking.

- **Integers:** Students will learn how to locate, add, subtract, multiply, and divide integers to solve word problems, as well as compare integers using absolute value and the order of operation.
- **Fractions:** Students will understand how fractions can be written into other forms without changing their value, and how to add, subtract, multiply, and divide fractions.
- **Decimals:** Students will explore how to rewrite fractions as decimals, and how to use decimals to solve real-world problems.
- **Patterns and Equations:** Students will learn how to translate words into equations and use them to solve number patterns.
- **Ratios and Proportions:** Students will explore how to use ratios to compare numbers, solve proportions, and convert between percent's, decimals, and fractions.
- **Probability and Graphing:** Students will be able to determine the probability of an event, and if they are independent or dependent events, as well as create a graph of an equation
- **Data Analysis:** Students will learn how to interpret statistics using stem-and-leaf plots, histograms, and other graphical means.
- **Geometry:** Students will explore how points, lines, and planes interact and how to solve equations using their information.
- **Measurement and Area:** Students will learn about finding perimeters and areas of different polygons and using the Pythagorean theorem to solve problems.
- **Surface Area and Volume:** Students will explore three-dimensional figures and how to find their surface area, volume of them.

<b>Unit 1: Integers</b>			
<b>Assignments</b>			
Mathematics 700	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top; padding: 5px;"> <ol style="list-style-type: none"> <li>1. Course Overview</li> <li>2. Integers on the Number Line</li> <li>3. Comparing and Ordering Integers</li> <li>4. Absolute Value</li> <li>5. Quiz 1: Integers</li> <li>6. Alternate Quiz 1—Form A: Integers*</li> <li>7. Alternate Quiz 1—Form B: Integers*</li> <li>8. Adding Integers with the Same Sign</li> <li>9. Adding Integers with Different Signs</li> <li>10. Subtracting Integers</li> <li>11. Quiz 2: Adding and Subtracting Integers</li> <li>12. Alternate Quiz 2—Form A: Adding and Subtracting Integers*</li> <li>13. Alternate Quiz 2—Form B: Adding and Subtracting Integers*</li> <li>14. Multiplying Integers</li> <li>15. Dividing Integers</li> <li>16. Using Integers</li> <li>17. Performance Task</li> <li>18. Quiz 3: Multiplying and Dividing Integers</li> </ol> </td> <td style="width: 50%; vertical-align: top; padding: 5px;"> <ol style="list-style-type: none"> <li>19. Alternate Quiz 3—Form A: Multiplying and Dividing Integers*</li> <li>20. Alternate Quiz 3—Form B: Multiplying and Dividing Integers*</li> <li>21. The Real Number System</li> <li>22. Real Number Properties</li> <li>23. The Distributive Property</li> <li>24. Order of Operations</li> <li>25. Exponents and the Order of Operations</li> <li>26. Performance Task</li> <li>27. Quiz 4: The Real Number System*</li> <li>28. Alternate Quiz 4—Form A: The Real Number System*</li> <li>29. Alternate Quiz 4—Form B: The Real Number System*</li> <li>30. Special Project*</li> <li>31. Review</li> <li>32. Test</li> <li>33. Alternate Test—Form A*</li> <li>34. Alternate Test—Form B*</li> <li>35. Glossary and Credits</li> </ol> </td> </tr> </table>	<ol style="list-style-type: none"> <li>1. Course Overview</li> <li>2. Integers on the Number Line</li> <li>3. Comparing and Ordering Integers</li> <li>4. Absolute Value</li> <li>5. Quiz 1: Integers</li> <li>6. Alternate Quiz 1—Form A: Integers*</li> <li>7. Alternate Quiz 1—Form B: Integers*</li> <li>8. Adding Integers with the Same Sign</li> <li>9. Adding Integers with Different Signs</li> <li>10. Subtracting Integers</li> <li>11. Quiz 2: Adding and Subtracting Integers</li> <li>12. Alternate Quiz 2—Form A: Adding and Subtracting Integers*</li> <li>13. Alternate Quiz 2—Form B: Adding and Subtracting Integers*</li> <li>14. Multiplying Integers</li> <li>15. Dividing Integers</li> <li>16. Using Integers</li> <li>17. Performance Task</li> <li>18. Quiz 3: Multiplying and Dividing Integers</li> </ol>	<ol style="list-style-type: none"> <li>19. Alternate Quiz 3—Form A: Multiplying and Dividing Integers*</li> <li>20. Alternate Quiz 3—Form B: Multiplying and Dividing Integers*</li> <li>21. The Real Number System</li> <li>22. Real Number Properties</li> <li>23. The Distributive Property</li> <li>24. Order of Operations</li> <li>25. Exponents and the Order of Operations</li> <li>26. Performance Task</li> <li>27. Quiz 4: The Real Number System*</li> <li>28. Alternate Quiz 4—Form A: The Real Number System*</li> <li>29. Alternate Quiz 4—Form B: The Real Number System*</li> <li>30. Special Project*</li> <li>31. Review</li> <li>32. Test</li> <li>33. Alternate Test—Form A*</li> <li>34. Alternate Test—Form B*</li> <li>35. Glossary and Credits</li> </ol>
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Unit 3: Decimals	
Assignments	
1. Comparing and Ordering Decimals	12. Performance Task
2. Rounding and Estimating Decimals	13. Scientific Notation
3. Adding and Subtracting Decimals	14. The Metric System
4. Multiplying and Dividing Decimals	15. Quiz 2: Applying Decimals
5. Performance Task*	16. Alternate Quiz 2 - Form A: Applying Decimals*
6. Quiz 1: Decimals and Their Operations	17. Alternate Quiz 2 - Form B: Applying Decimals*
7. Alternate Quiz 1 - Form A: Decimals and Their Operations*	18. Special Project*
8. Alternate Quiz 1 - Form B: Decimals and Their Operations*	19. Review
9. Terminating and Repeating Decimals	20. Test
10. Fractions as Decimals	21. Alternate Test - Form A*
11. Using Decimals	22. Alternate Test - Form B*
	23. Glossary and Credits

Unit 4: Patterns and Equations	
Assignments	
1. Working with Variables and Expressions	21. Quiz 3: Solving Equations
2. Adding and Subtracting Algebraic Expressions	22. Alternate Quiz 3—Form A: Solving Equations*
3. Expanding and Factoring Variable Expressions	23. Alternate Quiz 3—Form B: Solving Equations*
4. Evaluating Expressions	24. Solving Two-Step Equations
5. Using Formulas to Solve Problems	25. Working with Inequalities
6. Performance Task	26. Solving One-Step Inequalities
7. Quiz 1: Variable Expressions	27. Solving Two-Step Inequalities
8. Alternate Quiz 1—Form A: Variable Expressions*	28. Performance Task
9. Alternate Quiz 1—Form B: Variable Expressions*	29. Quiz 4: Equations and Inequalities
10. Identifying Number Patterns	30. Alternate Quiz 4—Form A: Equations and Inequalities*
11. Describing Number Patterns	31. Alternate Quiz 4—Form B: Equations and Inequalities*
12. Identifying Functions	32. Special Project*
13. Identifying Function Rules	33. Review
14. Quiz 2: Patterns and Functions	34. Test
15. Alternate Quiz 2—Form A: Patterns and Functions*	35. Alternate Test—Form A*
16. Alternate Quiz 2—Form B: Patterns and Functions*	36. Alternate Test—Form B*
17. Translating Word Sentences	37. Glossary and Credits
18. Solving Equations Using Mental Math	
19. Solving Equations Using Addition and Subtraction	
20. Solving Equations Using Multiplication and Division	

<b>Unit 5: Ratios and Proportions</b>	
<b>Assignments</b>	
Mathematics 700	1. Ratios
	2. Rates
	3. Proportions
	4. Quiz 1: Ratios, Rates, and Proportions
	5. Alternate Quiz 1: Form A: Ratios, Rates, and Proportions*
	6. Alternate Quiz 1: Form B: Ratios, Rates, and Proportions*
	7. Converting Customary Units
	8. Converting Metric Units
	9. Similarity
	10. Scale Drawings
	11. Performance Task
	12. Quiz 2: Using Proportions
	13. Alternate Quiz 2: Form A: Using Proportions*
	14. Alternate Quiz 2: Form B: Using Proportions*
	15. Converting Between Fractions, Decimals, and Percents
16. Percent of a Number	
17. Percent of Change	
18. Solving Percent Problems Using Proportions	
19. Solving Percent Problems Using Equations	
20. Performance Task	
21. Quiz 3: Fractions, Decimals, and Percents	
22. Alternate Quiz 3: Form A: Fractions, Decimals, and Percents*	
23. Alternate Quiz 3: Form B: Fractions, Decimals, and Percents*	
24. Special Project*	
25. Review	
26. Test	
27. Alternate Test: Form A*	
28. Alternate Test: Form B*	
29. Glossary and Credits	

<b>Unit 6: Probability and Graphing</b>	
<b>Assignments</b>	
Mathematics 700	1. Theoretical Probability
	2. Experimental Probability
	3. Sample Space
	4. Performance Task
	5. Independent and Dependent Events
	6. Quiz 1: Probability
	7. Alternate Quiz 1: Form A: Probability*
	8. Alternate Quiz 1: Form B: Probability*
	9. Graphing Ordered Pairs
	10. Graphing Linear Equations
	11. Slope
12. Direct Variation	
13. Performance Task	
14. Quiz 2: Functions	
15. Alternate Quiz 2: Form A: Functions*	
16. Alternate Quiz 2: Form B: Functions*	
17. Special Project*	
18. Review	
19. Test	
20. Alternate Test: Form A*	
21. Alternate Test: Form B*	
22. Glossary and Credits	

<b>Unit 7: Data Analysis</b>	
<b>Assignments</b>	
Mathematics 700	1. Collecting Data
	2. Determining Mean, Median, and Mode
	3. Using Mean, Median, and Mode
	4. Using Range
	5. Mean Absolute Deviation
	6. Quiz 1: Describing Data
	7. Alternate Quiz 1: Form A: Describing Data*
	8. Alternate Quiz 1: Form B: Describing Data*
	9. Dot Plots
	10. Box-and-Whisker Plots
	11. Performance Task
	12. Stem-and-Leaf Plots
	13. Histograms
	14. Other Graphs
	15. Quiz 2: Organizing Data
	16. Alternate Quiz 2: Form A: Organizing Data*
	17. Alternate Quiz 2: Form B: Organizing Data*
	18. Line Graphs
	19. Bar Graphs
20. Circle Graphs	
21. Performance Task	
22. Scatter Plots	
23. Quiz 3: Graphing Data and Making Predictions	
24. Alternate Quiz 3: Form A: Graphing Data and Making Predictions*	
25. Alternate Quiz 3: Form B: Graphing Data and Making Predictions*	
26. Financial Assets and Liabilities	
27. Personal Financial Skills	
28. Quiz 4: Financial Skills	
29. Alternate Quiz 4: Form A: Financial Skills	
30. Alternate Quiz 4: Form B: Financial Skills	
31. Special Project*	
32. Review	
33. Test	
34. Alternate Test: Form A*	
35. Alternate Test: Form B*	
36. Glossary and Credits	

<b>Unit 8: Geometry</b>	
<b>Assignments</b>	
Mathematics 700	1. Introduction to Geometry
	2. Special Pairs of Angles
	3. Polygons
	4. Circles
	5. Performance Task
	6. Quiz 1: Basic Geometry
	7. Alternate Quiz 1: Form A: Basic Geometry*
	8. Alternate Quiz 1: Form B: Basic Geometry*
	9. Project: Inscribed Polygons
	10. Triangles
	11. Quadrilaterals
	12. Drawing Triangles and Quadrilaterals
	13. Similar Polygons
	14. Performance Task
	15. Quiz 2: Classifying Polygons
16. Alternate Quiz 2: Form A: Classifying Polygons*	
17. Alternate Quiz 2: Form B: Classifying Polygons*	
18. Symmetry	
19. Reflections	
20. Translations	
21. Compound Transformations	
22. Quiz 3: Transformations	
23. Alternate Quiz 3: Form A: Transformations*	
24. Alternate Quiz 3: Form B: Transformations*	
25. Special Project*	
26. Review	
27. Test	
28. Alternate Test: Form A*	
29. Alternate Test: Form B*	
30. Glossary and Credits	

Unit 9: Measurement and Area		
Assignments		
Mathematics 700	1. Perimeter	16. Squares and Square Roots
	2. Circumference	17. Performance Task
	3. Composite Figures	18. The Pythagorean Theorem
	4. Performance Task	19. Applying the Pythagorean Theorem
	5. Quiz 1: Perimeter	20. Quiz 3: The Pythagorean Theorem
	6. Alternate Quiz 1: Form A: Perimeter*	21. Alternate Quiz 3: Form A: The Pythagorean Theorem*
	7. Alternate Quiz 1: Form B: Perimeter*	22. Alternate Quiz 3: Form B: The Pythagorean Theorem*
	8. Area of Parallelograms	23. Special Project*
	9. Area of Triangles and Trapezoids	24. Review
	10. Area of Circles	25. Test
	11. Area of Composite Figures	26. Alternate Test: Form A*
	12. Dimension Changes	27. Alternate Test: Form B*
	13. Quiz 2: Area	28. Glossary and Credits
	14. Alternate Quiz 2: Form A: Area*	
	15. Alternate Quiz 2: Form B: Area*	

Unit 10: Surface Area and Volume		
Assignments		
Mathematics 700	1. Classifying and Identifying Solids	15. Surface Area of Cylinders
	2. Nets and Cross Sections	16. Volume of Cylinders
	3. Surface Area and Volume	17. Dimension Changes
	4. Quiz 1: Solids	18. Performance Task
	5. Alternate Quiz 1: Form A: Solids*	19. Quiz 3: Cylinders
	6. Alternate Quiz 1: Form B: Solids*	20. Alternate Quiz 3: Form A: Cylinders*
	7. Surface Area of Rectangular Prisms	21. Alternate Quiz 3: Form B: Cylinders*
	8. Volume of Rectangular Prisms	22. Special Project*
	9. Performance Task	23. Review
	10. Surface Area of Triangular Prisms	24. Test
	11. Volume of Triangular Prisms	25. Alternate Test: Form A*
	12. Quiz 2: Prisms	26. Alternate Test: Form B*
	13. Alternate Quiz 2: Form A: Prisms*	27. Glossary and Credits
	14. Alternate Quiz 2: Form B: Prisms*	

Unit 11: Course Review and Exam		
Assignments		
Mathematics 700	1. Review 1	6. Performance Task 1*
	2. Review 2	7. Performance Task 2*
	3. Final Exam	8. Performance Task 3*
	4. Alternate Final Exam - Form A*	9. Performance Task 4*
	5. Alternate Final Exam - Form B*	

Unit 12: End of Course Exam		
Assignments		
Mathematics 700	1. Exam*	3. Alternate Exam - Form B*
	2. Alternate Exam - Form A*	

(\*) Indicates alternative assignment