

Mathematics 700 Fundamentals

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.

By the end of the course, students will be expected to do the following:

- Gain an increased awareness of how math is a life skill.
- Understand how math gives us different ways to model or express the same thing.
- Explore concepts taught in previous math courses, but at higher levels, applying the concepts to real world situations.
- Use proportional reasoning in order to model and solve real world problems.
- Utilize new skills and concepts that will help them in future math courses.

Unit 1: Integers			
Assignments			
Mathematics 700 Fundamentals	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> <ol style="list-style-type: none"> 1. Course Overview 2. Integers on the Number Line 3. Comparing and Ordering Integers 4. Absolute Value 5. Quiz 1: Integers 6. Alternate Quiz 1 - Form A: Integers* 7. Alternate Quiz 1 - Form B: Integers* 8. Adding Integers with the Same Sign 9. Adding Integers with Different Signs 10. Subtracting Integers 11. Quiz 2: Adding and Subtracting Integers 12. Alternate Quiz 2 - Form A: Adding and Subtracting Integers* 13. Alternate Quiz 2 - Form B: Adding and Subtracting Integers* 14. Multiplying Integers 15. Dividing Integers 16. Using Integers 17. Quiz 3: Multiplying and Dividing Integers 18. Alternate Quiz 3 - Form A: Multiplying and Dividing Integers* </td> <td style="width: 50%; vertical-align: top;"> <ol style="list-style-type: none"> 19. Alternate Quiz 3 - Form B: Multiplying and Dividing Integers* 20. The Real Number System 21. Real Number Properties 22. The Distributive Property 23. Order of Operations 24. Exponents and the Order of Operations 25. Quiz 4: The Real Number System 26. Alternate Quiz 4 - Form A: The Real Number System* 27. Alternate Quiz 4 - Form B: The Real Number System* 28. Special Project* 29. Review 30. Test 31. Alternate Test - Form A* 32. Alternate Test - Form B* 33. Glossary and Credits </td> </tr> </table>	<ol style="list-style-type: none"> 1. Course Overview 2. Integers on the Number Line 3. Comparing and Ordering Integers 4. Absolute Value 5. Quiz 1: Integers 6. Alternate Quiz 1 - Form A: Integers* 7. Alternate Quiz 1 - Form B: Integers* 8. Adding Integers with the Same Sign 9. Adding Integers with Different Signs 10. Subtracting Integers 11. Quiz 2: Adding and Subtracting Integers 12. Alternate Quiz 2 - Form A: Adding and Subtracting Integers* 13. Alternate Quiz 2 - Form B: Adding and Subtracting Integers* 14. Multiplying Integers 15. Dividing Integers 16. Using Integers 17. Quiz 3: Multiplying and Dividing Integers 18. Alternate Quiz 3 - Form A: Multiplying and Dividing Integers* 	<ol style="list-style-type: none"> 19. Alternate Quiz 3 - Form B: Multiplying and Dividing Integers* 20. The Real Number System 21. Real Number Properties 22. The Distributive Property 23. Order of Operations 24. Exponents and the Order of Operations 25. Quiz 4: The Real Number System 26. Alternate Quiz 4 - Form A: The Real Number System* 27. Alternate Quiz 4 - Form B: The Real Number System* 28. Special Project* 29. Review 30. Test 31. Alternate Test - Form A* 32. Alternate Test - Form B* 33. Glossary and Credits
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Unit 2: Fractions	
Assignments	
Mathematics 700 Fundamentals	1. Fractions and Mixed Numbers
	2. Equivalent Fractions
	3. Divisibility Rules and Prime Factorization
	4. Greatest Common Factor and Least Common Multiple
	5. Quiz 1: Working with Fractions
	6. Alternate Quiz 1 - Form A: Working with Fractions*
	7. Alternate Quiz 1 - Form B: Working with Fractions*
	8. Adding and Subtracting Fractions with Like Denominators
	9. Adding and Subtracting Fractions with Unlike Denominators
	10. Reducing Fractions
	11. Quiz 2: Adding and Subtracting Fractions
	12. Alternate Quiz 2 - Form A: Adding and Subtracting Fractions*
	13. Alternate Quiz 2 - Form B: Adding and Subtracting Fractions*
14. Comparing and Ordering Fractions	
15. Multiplying Fractions	
16. Dividing Fractions	
17. Quiz 3: Multiplying and Dividing Fractions	
18. Alternate Quiz 3 - Form A: Multiplying and Dividing Fractions*	
19. Alternate Quiz 3 - Form B: Multiplying and Dividing Fractions*	
20. Project: Chef for a Day	
21. Special Project*	
22. Review	
23. Test	
24. Alternate Test - Form A*	
25. Alternate Test - Form B*	
26. Glossary and Credits	

Unit 3: Decimals	
Assignments	
Mathematics 700 Fundamentals	1. Comparing and Ordering Decimals
	2. Rounding and Estimating Decimals
	3. Adding and Subtracting Decimals
	4. Multiplying and Dividing Decimals
	5. Quiz 1: Decimals and Their Operations
	6. Alternate Quiz 1 - Form A: Decimals and Their Operations*
	7. Alternate Quiz 1 - Form B: Decimals and Their Operations*
	8. Terminating and Repeating Decimals
	9. Fractions as Decimals
	10. Using Decimals
	11. Scientific Notation
	12. The Metric System
	13. Quiz 2: Applying Decimals
14. Alternate Quiz 2 - Form A: Applying Decimals*	
15. Alternate Quiz 2 - Form B: Applying Decimals*	
16. Special Project*	
17. Review	
18. Test	
19. Alternate Test - Form A*	
20. Alternate Test - Form B*	
21. Glossary and Credits	

Unit 4: Patterns and Equations	
Assignments	
Mathematics 700 Fundamentals	1. Working with Variables and Expressions
	2. Translating Word Sentences
	3. Evaluating Expressions
	4. Using Formulas to Solve Problems
	5. Quiz 1: Variable Expressions
	6. Alternate Quiz 1 - Form A: Variable Expressions*
	7. Alternate Quiz 1 - Form B: Variable Expressions*
	8. Identifying Number Patterns
	9. Describing Number Patterns
	10. Identifying Functions
	11. Identifying Function Rules
	12. Quiz 2: Patterns and Functions
	13. Alternate Quiz 2 - Form A: Patterns and Functions*
	14. Alternate Quiz 2 - Form B: Patterns and Functions*
	15. Solving Equations Using Mental Math
	16. Solving Equations Using Addition and Subtraction
	17. Solving Equations Using Multiplication and Division
18. Quiz 3: Solving Equations	
19. Alternate Quiz 3 - Form A: Solving Equations*	
20. Alternate Quiz 3 - Form B: Solving Equations*	
21. Solving Two-Step Equations	
22. Working with Inequalities	
23. Solving One-Step Inequalities	
24. Quiz 4: Equations and Inequalities	
25. Alternate Quiz 4 - Form A: Equations and Inequalities*	
26. Alternate Quiz 4 - Form B: Equations and Inequalities*	
27. Special Project*	
28. Review	
29. Test	
30. Alternate Test - Form A*	
31. Alternate Test - Form B*	
32. Glossary and Credits	

Unit 5: Ratios and Proportions	
Assignments	
Mathematics 700 Fundamentals	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. Quiz 2: Using Proportions
	12. Alternate Quiz 2 - Form A: Using Proportions*
	13. Alternate Quiz 2 - Form B: Using Proportions*
	14. Converting Between Fractions, Decimals, and Percents
15. Percent of a Number	
16. Percent of Change	
17. Solving Percent Problems Using Proportions	
18. Solving Percent Problems Using Equations	
19. Quiz 3: Fractions, Decimals, and Percents	
20. Alternate Quiz 3 - Form A: Fractions, Decimals, and Percents*	
21. Alternate Quiz 3 - Form B: Fractions, Decimals, and Percents*	
22. Special Project*	
23. Review	
24. Test	
25. Alternate Test - Form A*	
26. Alternate Test - Form B*	
27. Glossary and Credits	

Fundamentals 700	Unit 6: Probability and Graphing		
	Assignments		
	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> <ol style="list-style-type: none"> 1. Theoretical Probability 2. Experimental Probability 3. Sample Space 4. Independent and Dependent Events 5. Quiz 1: Probability 6. Alternate Quiz 1 - Form A: Probability* 7. Alternate Quiz 1 - Form B: Probability* 8. Graphing Ordered Pairs 9. Graphing Linear Equations 10. Slope </td> <td style="width: 50%; vertical-align: top;"> <ol style="list-style-type: none"> 11. Direct Variation 12. Quiz 2: Functions 13. Alternate Quiz 2 - Form A: Functions* 14. Alternate Quiz 2 - Form B: Functions* 15. Special Project* 16. Review 17. Test 18. Alternate Test - Form A* 19. Alternate Test - Form B* 20. Glossary and Credits </td> </tr> </table>	<ol style="list-style-type: none"> 1. Theoretical Probability 2. Experimental Probability 3. Sample Space 4. Independent and Dependent Events 5. Quiz 1: Probability 6. Alternate Quiz 1 - Form A: Probability* 7. Alternate Quiz 1 - Form B: Probability* 8. Graphing Ordered Pairs 9. Graphing Linear Equations 10. Slope 	<ol style="list-style-type: none"> 11. Direct Variation 12. Quiz 2: Functions 13. Alternate Quiz 2 - Form A: Functions* 14. Alternate Quiz 2 - Form B: Functions* 15. Special Project* 16. Review 17. Test 18. Alternate Test - Form A* 19. Alternate Test - Form B* 20. Glossary and Credits
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Fundamentals 700	Unit 7: Data Analysis		
	Assignments		
	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> <ol style="list-style-type: none"> 1. Collecting Data 2. Determining Mean, Median, and Mode 3. Using Mean, Median, and Mode 4. Using Range 5. Quiz 1: Describing Data 6. Alternate Quiz 1 - Form A: Describing Data* 7. Alternate Quiz 1 - Form B: Describing Data* 8. Box-and-Whisker Plots 9. Stem-and-Leaf Plots 10. Histograms 12. Quiz 2: Organizing Data 13. Alternate Quiz 2 - Form A: Organizing Data* 14. Alternate Quiz 2 - Form B: Organizing Data* 15. Line Graphs </td> <td style="width: 50%; vertical-align: top;"> <ol style="list-style-type: none"> 16. Bar Graphs 17. Circle Graphs 18. Scatter Plots 19. Quiz 3: Graphing Data and Making Predictions 20. Alternate Quiz 3 - Form A: Graphing Data and Making Predictions* 21. Alternate Quiz 3 - Form B: Graphing Data and Making Predictions* 22. Special Project* 23. Review 24. Test 25. Alternate Test - Form A* 26. Alternate Test - Form B* 27. Glossary and Credits </td> </tr> </table>	<ol style="list-style-type: none"> 1. Collecting Data 2. Determining Mean, Median, and Mode 3. Using Mean, Median, and Mode 4. Using Range 5. Quiz 1: Describing Data 6. Alternate Quiz 1 - Form A: Describing Data* 7. Alternate Quiz 1 - Form B: Describing Data* 8. Box-and-Whisker Plots 9. Stem-and-Leaf Plots 10. Histograms 12. Quiz 2: Organizing Data 13. Alternate Quiz 2 - Form A: Organizing Data* 14. Alternate Quiz 2 - Form B: Organizing Data* 15. Line Graphs 	<ol style="list-style-type: none"> 16. Bar Graphs 17. Circle Graphs 18. Scatter Plots 19. Quiz 3: Graphing Data and Making Predictions 20. Alternate Quiz 3 - Form A: Graphing Data and Making Predictions* 21. Alternate Quiz 3 - Form B: Graphing Data and Making Predictions* 22. Special Project* 23. Review 24. Test 25. Alternate Test - Form A* 26. Alternate Test - Form B* 27. Glossary and Credits
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Mathematics 700 Fundamentals	Unit 8: Geometry		
	Assignments		
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Unit 9: Measurement and Area		
Assignments		
Mathematics 700 Fundamentals	1. Perimeter	15. Squares and Square Roots
	2. Circumference	16. The Pythagorean Theorem
	3. Composite Figures	17. Applying the Pythagorean Theorem
	4. Quiz 1: Perimeter	18. Quiz 3: The Pythagorean Theorem
	5. Alternate Quiz 1 - Form A: Perimeter*	19. Alternate Quiz 3 - Form A: The Pythagorean Theorem*
	6. Alternate Quiz 1 - Form B: Perimeter*	20. Alternate Quiz 3 - Form B: The Pythagorean Theorem*
	7. Area of Parallelograms	21. Special Project*
	8. Area of Triangles and Trapezoids	22. Review
	9. Area of Circles	23. Test
	10. Area of Composite Figures	24. Alternate Test - Form A*
	11. Dimension Changes	25. Alternate Test - Form B*
	12. Quiz 2: Area	26. Glossary and Credits
	13. Alternate Quiz 2 - Form A: Area*	
	14. Alternate Quiz 2 - Form B: Area*	

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

Unit 11: Course Review and Exam		
Assignments		
M700F	1. Course Review 1	4. Alternate Exam - Form A*
	2. Course Review 2	5. Alternate Exam - Form B*
	3. Exam	