

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.

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																																					
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MATHEMATICS 700	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px 5px;">1. Course Overview</td> <td style="width: 50%; padding: 2px 5px;">19. Alternate Quiz 3: Form B: Multiplying and Dividing Integers</td> </tr> <tr> <td style="padding: 2px 5px;">2. Integers on the Number Line</td> <td style="padding: 2px 5px;">20. The Real Number System</td> </tr> <tr> <td style="padding: 2px 5px;">3. Comparing and Ordering Integers</td> <td style="padding: 2px 5px;">21. Real Number Properties</td> </tr> <tr> <td style="padding: 2px 5px;">4. Absolute Value</td> <td style="padding: 2px 5px;">22. The Distributive Property</td> </tr> <tr> <td style="padding: 2px 5px;">5. Quiz 1: Integers</td> <td style="padding: 2px 5px;">23. Order of Operations</td> </tr> <tr> <td style="padding: 2px 5px;">6. Alternate Quiz 1: Form A: Integers</td> <td style="padding: 2px 5px;">24. Exponents and the Order of Operations</td> </tr> <tr> <td style="padding: 2px 5px;">7. Alternate Quiz 1: Form B: Integers</td> <td style="padding: 2px 5px;">25. Quiz 4: The Real Number System</td> </tr> <tr> <td style="padding: 2px 5px;">8. Adding Integers with the Same Sign</td> <td style="padding: 2px 5px;">26. Alternate Quiz 4: Form A: The Real Number System</td> </tr> <tr> <td style="padding: 2px 5px;">9. Adding Integers with Different Signs</td> <td style="padding: 2px 5px;">27. Alternate Quiz 4: Form B: The Real Number System</td> </tr> <tr> <td style="padding: 2px 5px;">10. Subtracting Integers</td> <td style="padding: 2px 5px;">28. Special Project</td> </tr> <tr> <td style="padding: 2px 5px;">11. Quiz 2: Adding and Subtracting Integers</td> <td style="padding: 2px 5px;">29. Review</td> </tr> <tr> <td style="padding: 2px 5px;">12. Alternate Quiz 2: Form A: Adding and Subtracting Integers</td> <td style="padding: 2px 5px;">30. Test</td> </tr> <tr> <td style="padding: 2px 5px;">13. Alternate Quiz 2: Form B: Adding and Subtracting Integers</td> <td style="padding: 2px 5px;">31. Alternate Test: Form A</td> </tr> <tr> <td style="padding: 2px 5px;">14. Multiplying Integers</td> <td style="padding: 2px 5px;">32. Alternate Test: Form B</td> </tr> <tr> <td style="padding: 2px 5px;">15. Dividing Integers</td> <td style="padding: 2px 5px;">33. Glossary and Credits</td> </tr> <tr> <td style="padding: 2px 5px;">16. Using Integers</td> <td></td> </tr> <tr> <td style="padding: 2px 5px;">17. Quiz 3: Multiplying and Dividing Integers</td> <td></td> </tr> <tr> <td style="padding: 2px 5px;">18. Alternate Quiz 3: Form A: Multiplying and Dividing Integers</td> <td></td> </tr> </table>	1. Course Overview	19. Alternate Quiz 3: Form B: Multiplying and Dividing Integers	2. Integers on the Number Line	20. The Real Number System	3. Comparing and Ordering Integers	21. Real Number Properties	4. Absolute Value	22. The Distributive Property	5. Quiz 1: Integers	23. Order of Operations	6. Alternate Quiz 1: Form A: Integers	24. Exponents and the Order of Operations	7. Alternate Quiz 1: Form B: Integers	25. Quiz 4: The Real Number System	8. Adding Integers with the Same Sign	26. Alternate Quiz 4: Form A: The Real Number System	9. Adding Integers with Different Signs	27. Alternate Quiz 4: Form B: The Real Number System	10. Subtracting Integers	28. Special Project	11. Quiz 2: Adding and Subtracting Integers	29. Review	12. Alternate Quiz 2: Form A: Adding and Subtracting Integers	30. Test	13. Alternate Quiz 2: Form B: Adding and Subtracting Integers	31. Alternate Test: Form A	14. Multiplying Integers	32. Alternate Test: Form B	15. Dividing Integers	33. Glossary and Credits	16. Using Integers		17. Quiz 3: Multiplying and Dividing Integers		18. Alternate Quiz 3: Form A: Multiplying and Dividing Integers	
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UNIT 2: FRACTIONS

MATHEMATICS
700

Assignment Titles

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|---|---|
| 1. Fractions and Mixed Numbers | 13. Alternate Quiz 2: Form B: Adding and Subtracting Fractions* |
| 2. Equivalent Fractions | 14. Comparing and Ordering Fractions |
| 3. Divisibility Rules and Prime Factorization | 15. Multiplying Fractions |
| 4. Greatest Common Factor and Least Common Multiple | 16. Dividing Fractions |
| 5. Quiz 1: Working with Fractions | 17. Quiz 3: Multiplying and Dividing Fractions |
| 6. Alternate Quiz 1: Form A: Working with Fractions* | 18. Alternate Quiz 3: Form A: Multiplying and Dividing Fractions* |
| 7. Alternate Quiz 1: Form B: Working with Fractions* | 19. Alternate Quiz 3: Form B: Multiplying and Dividing Fractions* |
| 8. Adding and Subtracting Fractions with Like Denominators | 20. Project: Chef for a Day |
| 9. Adding and Subtracting Fractions with Unlike Denominators | 21. Special Project* |
| 10. Reducing Fractions | 22. Review |
| 11. Quiz 2: Adding and Subtracting Fractions | 23. Test |
| 12. Alternate Quiz 2: Form A: Adding and Subtracting Fractions* | 24. Alternate Test: Form A* |
| | 25. Alternate Test: Form B* |
| | 26. Glossary and Credits |

UNIT 3: DECIMALS

MATHEMATICS
700

Assignment Titles

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

UNIT 4: PATTERNS AND EQUATIONS

MATHEMATICS
700

Assignment Titles

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

UNIT 5: RATIOS AND PROPORTIONS

MATHEMATICS
700

Assignment Titles

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

UNIT 6: PROBABILITY AND GRAPHING

MATHEMATICS
700

Assignment Titles

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|---|--|
| 1. Theoretical Probability | 11. Direct Variation |
| 2. Experimental Probability | 12. Quiz 2: Functions |
| 3. Sample Space | 13. Alternate Quiz 2: Form A: Functions* |
| 4. Independent and Dependent Events | 14. Alternate Quiz 2: Form B: Functions* |
| 5. Quiz 1: Probability | 15. Special Project* |
| 6. Alternate Quiz 1: Form A: Probability* | 16. Review |
| 7. Alternate Quiz 1: Form B: Probability* | 17. Test |
| 8. Graphing Ordered Pairs | 18. Alternate Test: Form A* |
| 9. Graphing Linear Equations | 19. Alternate Test: Form B* |
| 10. Slope | 20. Glossary and Credits |

UNIT 7: DATA ANALYSIS

MATHEMATICS
700

Assignment Titles

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|--|---|
| 1. Collecting Data | 16. Bar Graphs |
| 2. Determining Mean, Median, and Mode | 17. Circle Graphs |
| 3. Using Mean, Median, and Mode | 18. Scatter Plots |
| 4. Using Range | 19. Quiz 3: Graphing Data and Making Predictions |
| 5. Quiz 1: Describing Data | 20. Alternate Quiz 3: Form A: Graphing Data and Making Predictions* |
| 6. Alternate Quiz 1: Form A: Describing Data* | 21. Alternate Quiz 3: Form B: Graphing Data and Making Predictions* |
| 7. Alternate Quiz 1: Form B: Describing Data* | 22. Special Project* |
| 8. Box-and-Whisker Plots | 23. Review |
| 9. Stem-and-Leaf Plots | 24. Test |
| 10. Histograms | 25. Alternate Test: Form A* |
| 11. Other Graphs | 26. Alternate Test: Form B* |
| 12. Quiz 2: Organizing Data | 27. Glossary and Credits |
| 13. Alternate Quiz 2: Form A: Organizing Data* | |
| 14. Alternate Quiz 2: Form B: Organizing Data* | |
| 15. Line Graphs | |

UNIT 8: GEOMETRY		
Assignment Titles		
MATHEMATICS 700	1. Introduction to Geometry	15. Symmetry
	2. Special Pairs of Angles	16. Reflections
	3. Polygons	17. Translations
	4. Circles	18. Compound Transformations
	5. Quiz 1: Basic Geometry	19. Quiz 3: Transformations
	6. Alternate Quiz 1: Form A: Basic Geometry*	20. Alternate Quiz 3: Form A: Transformations*
	7. Alternate Quiz 1: Form B: Basic Geometry*	21. Alternate Quiz 3: Form B: Transformations*
	8. Project: Inscribed Polygons	22. Special Project*
	9. Triangles	23. Review
	10. Quadrilaterals	24. Test
	11. Similar Polygons	25. Alternate Test: Form A*
	12. Quiz 2: Classifying Polygons	26. Alternate Test: Form B*
	13. Alternate Quiz 2: Form A: Classifying Polygons*	27. Glossary and Credits
	14. Alternate Quiz 2: Form B: Classifying Polygons*	

UNIT 9: MEASUREMENT AND AREA		
Assignment Titles		
MATHEMATICS 700	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		
Assignment Titles		
MATHEMATICS 700	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		
Assignment Titles		
MATHEMATICS 700	1. Course Review 1	4. Alternate Exam: Form A*
	2. Course Review 2	5. Alternate Exam: Form B*
	3. Exam	

(*) Indicates alternate assignment