



Switched-On

SCHOOLHOUSE® 2012 EDITION

Curriculum Catalog

Mathematics 700

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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	
Assignment Titles	
1. Course Overview	18. Alternate Quiz 3: Form A: Multiplying and
2. Integers on the Number Line	19. Alternate Quiz 3: Form B: Multiplying and
3. Comparing and Ordering Integers	20. The Real Number System
4. Absolute Value	21. Real Number Properties
5. Quiz 1: Integers	22. The Distributive Property
6. Alternate Quiz 1: Form A: Integers	23. Order of Operations
7. Alternate Quiz 1: Form B: Integers	24. Exponents and the Order of Operations
8. Adding Integers with the Same Sign	25. Quiz 4: The Real Number System
9. Adding Integers with Different Signs	26. Alternate Quiz 4: Form A: The Real Number
10. Subtracting Integers	System
11. Quiz 2: Adding and Subtracting Integers	27. Alternate Quiz 4: Form B: The Real Number
12. Alternate Quiz 2: Form A: Adding and Subtracting	System
Integers	28. Special Project
13. Alternate Quiz 2: Form B: Adding and Subtracting	29. Review
Integers	30. Test
14. Multiplying Integers	31. Alternate Test: Form A
15. Dividing Integers	32. Alternate Test: Form B
16. Using Integers	33. Glossary and Credits
17. Quiz 3: Multiplying and Dividing Integers	

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

UNIT 3: DECIMALS
Assignment Titles

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|--|---|
| 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
Assignment Titles

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

UNIT 5: RATIOS AND PROPORTIONS
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
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
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

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|--|---|
| 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

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|--|---|
| 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 | 26. 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**

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|---------------------------------------|---|
| 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**

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|--------------------|----------------------------|
| 1. Course Review 1 | 14. Alternate Exam: Form A |
| 2. Course Review 2 | 15. Alternate Exam: Form B |
| 3. Exam | |