



2012 Curriculum Catalog

Mathematics 600

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Course Overview

Math 600 is a full-year elementary math course focusing on number skills and numerical literacy, with an introduction to the number skills needed for algebra. In it, students will gain solid experience with number theory and operations, including decimals and fractions. This course also integrates geometric concepts and skills throughout the units, as well as introducing students to statistical and probability concepts.

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

- Perform all four operations on whole numbers, decimals, and fractions.
- Factor numbers completely and find greatest common factors.
- Convert between fractions, decimals, and percents.
- Represent numbers with exponents.
- Calculate perimeters and areas of regular plane shapes and measure angles.
- Plot ordered pairs on coordinate grids.
- Represent data on statistical charts, including picture, bar, line, and circle graphs.
- Calculate probabilities and make predictions.

UNIT 1: WHOLE NUMBERS AND ALGEBRA	
Assignment Titles	
1. Course Overview	14. Alternate Quiz 2—Form B: Operations and Number Patterns
2. Rounding and Estimation	15. Variables
3. Whole Number Operations	16. Expressions
4. Real Number Properties	17. Variable Expressions
5. Quiz 1: Whole Numbers and Their Properties	18. Equations and Mental Math
6. Alternate Quiz 1—Form A: Whole Numbers and Their Properties	19. Quiz 3: Algebra
7. Alternate Quiz 1—Form B: Whole Numbers and Their Properties	20. Alternate Quiz 3—Form A: Algebra
8. Exponents	21. Alternate Quiz 3—Form B: Algebra
9. Squares, Cubes, and Roots	22. Special Project
10. Order of Operations	23. Review
11. Number Patterns	24. Test
12. Quiz 2: Operations and Number Patterns	25. Alternate Test—Form A
13. Alternate Quiz 2—Form A: Operations and Number Patterns	26. Alternate Test—Form B
	27. Glossary and Credits

UNIT 2: DATA ANALYSIS	
Assignment Titles	
1. Collecting Data and the Mean	14. Bar Graphs
2. Median, Mode, and Range	15. Line Graphs
3. Describing Data	16. Venn Diagrams
4. Quiz 1: Collecting and Describing Data	17. Vertex-Edge Graphs
5. Alternate Quiz 1—Form A: Collecting and Describing Data	18. Quiz 3: Displaying and Interpreting Data
6. Alternate Quiz 1—Form B: Collecting and Describing Data	19. Alternate Quiz 3—Form A: Displaying and Interpreting Data
7. Frequency Tables	20. Alternate Quiz 3—Form B: Displaying and Interpreting Data
8. Histograms	21. Special Project
9. Line Plots	22. Review
10. Stem-and-Leaf Plots	23. Test
11. Quiz 2: Organizing Data	24. Alternate Test—Form A
12. Alternate Quiz 2—Form A: Organizing Data	25. Alternate Test—Form B
13. Alternate Quiz 2—Form B: Organizing Data	26. Glossary and Credits

UNIT 3: DECIMALS
Assignment Titles

1. Decimals and Place Value	14. Alternate Quiz 2—Form B: Multiplying and Dividing Decimal Numbers
2. Ordering and Comparing	15. Length
3. Rounding and Estimating	16. Mass and Capacity
4. Adding and Subtracting	17. Multiplying and Dividing by Powers of Ten
5. Quiz 1: Decimal Numbers	18. Converting Metric Units
6. Alternate Quiz 1—Form A: Decimal Numbers	19. Quiz 3: The Metric System
7. Alternate Quiz 1—Form B: Decimal Numbers	20. Alternate Quiz 3—Form A: The Metric System
8. Multiplying by Whole Numbers	21. Alternate Quiz 3—Form B: The Metric System
9. Multiplying by Decimals	22. Special Project
10. Dividing by Whole Numbers	23. Review
11. Dividing by Decimals	24. Test
12. Quiz 2: Multiplying and Dividing Decimal Numbers	25. Alternate Test—Form A
13. Alternate Quiz 2—Form A: Multiplying and Dividing Decimal Numbers	26. Alternate Test—Form B
	27. Glossary and Credits

UNIT 4: FRACTIONS
Assignment Titles

1. Divisibility and Prime Factorization	14. Changing Decimals to Fractions
2. Greatest Common Factor	15. Changing Fractions to Decimals
3. Fractions	16. Estimating with Fractions
4. Equivalent Fractions	17. Measures of Time
5. Quiz 1: Factors and Fractions	18. Quiz 3: Decimals and Fractions
6. Alternate Quiz 1—Form A: Factors and Fractions	19. Alternate Quiz 3—Form A: Decimals and Fractions
7. Alternate Quiz 1—Form B: Factors and Fractions	20. Alternate Quiz 3—Form B: Decimals and Fractions
8. Least Common Multiple	21. Special Project
9. Comparing and Ordering Fractions	22. Review
10. Improper Fractions and Mixed Numbers	23. Test
11. Quiz 2: The LCM and Fractions	24. Alternate Test—Form A
12. Alternate Quiz 2—Form A: The LCM and Fractions	25. Alternate Test—Form B
13. Alternate Quiz 2—Form B: The LCM and Fractions	26. Glossary and Credits

UNIT 5: FRACTION OPERATIONS
Assignment Titles

1. Fractions with Like Denominators	14. Alternate Quiz 2—Form B: Multiplying and Dividing Fractions
2. Fractions with Unlike Denominators	15. Length
3. Mixed Numbers	16. Weight
4. Renaming Mixed Numbers	17. Capacity
5. Quiz 1: Adding and Subtracting Fractions	18. Quiz 3: The Customary System
6. Alternate Quiz 1—Form A: Adding and Subtracting Fractions	19. Alternate Quiz 3—Form A: The Customary System
7. Alternate Quiz 1—Form B: Adding and Subtracting Fractions	20. Alternate Quiz 3—Form B: The Customary System
8. Multiplying Fractions	21. Special Project
9. Multiplying Mixed Numbers	22. Review
10. Dividing Fractions	23. Test
11. Dividing Mixed Numbers	24. Alternate Test—Form A
12. Quiz 2: Multiplying and Dividing Fractions	25. Alternate Test—Form B
13. Alternate Quiz 2—Form A: Multiplying and Dividing Fractions	26. Glossary and Credits

UNIT 6: RATIO, PROPORTION, AND PERCENT
Assignment Titles

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|--|---|
| 1. Ratios | 14. Converting Between Decimals and Percents |
| 2. Geometry: Circumference | 15. Converting Between Fractions and Percents |
| 3. Rates | 16. Data Analysis: Circle Graphs |
| 4. Quiz 1: Ratios | 17. Percent of a Number |
| 5. Alternate Quiz 1—Form A: Ratios | 18. Quiz 3: Percent |
| 6. Alternate Quiz 1—Form B: Ratios | 19. Alternate Quiz 3—Form A: Percent |
| 7. Proportions | 20. Alternate Quiz 3—Form B: Percent |
| 8. Solving Proportions | 21. Special Project |
| 9. Scale Drawings | 22. Review |
| 10. Project: Make a Scale Drawing | 23. Test |
| 11. Quiz 2: Proportions | 24. Alternate Test—Form A |
| 12. Alternate Quiz 2—Form A: Proportions | 25. Alternate Test—Form B |
| 13. Alternate Quiz 2—Form B: Proportions | 26. Glossary and Credits |

UNIT 7: PROBABILITY AND GEOMETRY
Assignment Titles

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|--|---|
| 1. Introduction to Probability | 14. Triangles |
| 2. Complement Events | 15. Quadrilaterals |
| 3. Sample Space | 16. Polygons |
| 4. Project: Theoretical vs. Experimental Probability | 17. Congruent and Similar Figures |
| 5. Quiz 1: Probability | 18. Quiz 3: Geometry: Polygons |
| 6. Alternate Quiz 1—Form A: Probability | 19. Alternate Quiz 3—Form A: Geometry: Polygons |
| 7. Alternate Quiz 1—Form B: Probability | 20. Alternate Quiz 3—Form B: Geometry: Polygons |
| 8. Introduction to Geometry | 21. Special Project |
| 9. Measuring and Classifying Angles | 22. Review |
| 10. Angle Relationships | 23. Test |
| 11. Quiz 2: Geometry: Angles | 24. Alternate Test—Form A |
| 12. Alternate Quiz 2—Form A: Geometry: Angles | 25. Alternate Test—Form B |
| 13. Alternate Quiz 2—Form B: Geometry: Angles | 26. Glossary and Credits |

UNIT 8: GEOMETRY AND MEASUREMENT
Assignment Titles

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|---|--|
| 1. Perimeter | 13. Finding Missing Dimensions |
| 2. Area of Parallelograms | 14. Project: Triangular Prisms |
| 3. Area of Triangles | 15. Quiz 2: Solid Figures |
| 4. Area of Composite Figures | 16. Alternate Quiz 2—Form A: Solid Figures |
| 5. Area of Circles | 17. Alternate Quiz 2—Form B: Solid Figures |
| 6. Project: Estimating Area | 18. Special Project |
| 7. Quiz 1: Plane Figures | 19. Review |
| 8. Alternate Quiz 1—Form A: Plane Figures | 20. Test |
| 9. Alternate Quiz 1—Form B: Plane Figures | 21. Alternate Test—Form A |
| 10. Solid Figures | 22. Alternate Test—Form B |
| 11. Surface Area of Rectangular Prisms | 23. Glossary and Credits |
| 12. Volume of Rectangular Prisms | |

UNIT 9: INTEGERS AND TRANSFORMATIONS
Assignment Titles

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|---|---|
| 1. Integers | 14. Alternate Quiz 2—Form B: Integer Operations |
| 2. Comparing and Ordering Integers | 15. Translations |
| 3. Absolute Value | 16. Reflections and Rotations |
| 4. Coordinate Plane | 17. Line Symmetry |
| 5. Quiz 1: Integers | 18. Quiz 3: Transformations |
| 6. Alternate Quiz 1—Form A: Integers | 19. Alternate Quiz 3—Form A: Transformations |
| 7. Alternate Quiz 1—Form B: Integers | 20. Alternate Quiz 3—Form B: Transformations |
| 8. Addition | 21. Special Project |
| 9. Subtraction | 22. Review |
| 10. Multiplication | 23. Test |
| 11. Division | 24. Alternate Test—Form A |
| 12. Quiz 2: Integer Operations | 25. Alternate Test—Form B |
| 13. Alternate Quiz 2—Form A: Integer Operations | 26. Glossary and Credits |

UNIT 10: EQUATIONS AND FUNCTIONS
Assignment Titles

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|--|--|
| 1. Equations | 14. Alternate Quiz 2—Form B: More Equations and Inequalities |
| 2. Writing Equations | 15. Functions |
| 3. Addition Equations | 16. Function Rules |
| 4. Subtraction Equations | 17. Graphing Functions |
| 5. Quiz 1: Equations | 18. Quiz 3: Functions |
| 6. Alternate Quiz 1—Form A: Equations | 19. Alternate Quiz 3—Form A: Functions |
| 7. Alternate Quiz 1—Form B: Equations | 20. Alternate Quiz 3—Form B: Functions |
| 8. Multiplication Equations | 21. Special Project |
| 9. Division Equations | 22. Review |
| 10. Inequalities | 23. Test |
| 11. Graphing Inequalities | 24. Alternate Test—Form A |
| 12. Quiz 2: More Equations and Inequalities | 25. Alternate Test—Form B |
| 13. Alternate Quiz 2—Form A: More Equations and Inequalities | 26. Glossary and Credits |

UNIT 11: COURSE REVIEW AND EXAM
Assignment Titles

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|--------------------|--------------------------|
| 1. Course Review 1 | 4. Alternate Exam—Form A |
| 2. Course Review 2 | 5. Alternate Exam—Form B |
| 3. Exam | |