



monarch

2017 - 2018 Curriculum Catalog

Mathematics 600

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Mathematics 600 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 percentages.
- 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 | |
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| Assignments | |
| Mathematics 600 | 1. Course Overview |
| | 2. Rounding and Estimation |
| | 3. Whole Number Operations |
| | 4. Real Number Properties |
| | 5. Quiz 1: Whole Numbers and Their Properties |
| | 6. Alternate Quiz 1:Form A: Whole Numbers and |
| | 7. Their Properties* |
| | 8. Alternate Quiz 1:Form B: Whole Numbers and |
| | 9. Their Properties* |
| | 10. Exponents |
| | 11. Squares, Cubes, and Roots |
| | 12. Order of Operations |
| | 13. Number Patterns |
| | 14. Quiz 2: Operations and Number Patterns |
| | 15. Alternate Quiz 2:Form A: Operations and Number |
| | 16. Patterns* |
| | 17. Alternate Quiz 2:Form B: Operations and Number |
| | 18. Patterns* |
| | 19. Variables |
| | 20. Expressions |
| | 21. Variable Expressions |
| | 22. Equations and Mental Math |
| | 23. Quiz 3: Algebra |
| | 24. Alternate Quiz 3:Form A: Algebra* |
| | 25. Alternate Quiz 3:Form B: Algebra* |
| | 26. Special Project* |
| | 27. Review |
| 28. Test | |
| 29. Alternate Test: Form A* | |
| 30. Alternate Test: Form B* | |
| 31. Glossary and Credits | |

| Unit 2: Data Analysis | |
|---|--|
| Assignments | |
| 1. Collecting Data and the Mean | 14. Bar Graphs |
| 2. Median, Mode, and Range | Line Graphs |
| 3. Describing Data | 15. Venn Diagrams |
| 4. Quiz 1: Collecting and Describing Data | 16. Vertex-Edge Graphs |
| 5. Alternate Quiz 1:Form A: Collecting and Describing | 17. Quiz 3: Displaying and Interpreting Data |
| 6. Data* | 18. Alternate Quiz 3:Form A: Displaying and |
| 7. Alternate Quiz 1:Form B: Collecting and Describing | 19. Interpreting Data* |
| 8. Data* | 20. Alternate Quiz 3:Form B: Displaying and |
| 9. Frequency Tables | 21. Interpreting Data* |
| 10. Histograms | 22. Special Project* |
| 11. Line Plots | 23. Review |
| 12. Stem-and-Leaf Plots | 24. Test |
| 13. Quiz 2: Organizing Data | 25. Alternate Test: Form A* |
| 14. Alternate Quiz 2:Form A: Organizing Data* | 26. Alternate Test: Form B* |
| 15. Alternate Quiz 2:Form B: Organizing Data* | 27. Glossary and Credits |

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

| Unit 4: Fractions | |
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| Assignments | |
| 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 | |
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| Assignments | |
| Mathematics 600 | 1. Fractions with Like Denominators |
| | 2. Fractions with Unlike Denominators |
| | 3. Mixed Numbers |
| | 4. Renaming Mixed Numbers |
| | 5. Quiz 1: Adding and Subtracting Fractions |
| | 6. Alternate Quiz 1:Form A: Adding and Subtracting Fractions* |
| | 7. Alternate Quiz 1:Form B: Adding and Subtracting Fractions* |
| | 8. Multiplying Fractions |
| | 9. Multiplying Mixed Numbers |
| | 10. Dividing Fractions |
| | 11. Dividing Mixed Numbers |
| | 12. Quiz 2: Multiplying and Dividing Fractions |
| | 13. Alternate Quiz 2:Form A: Multiplying and Dividing Fractions* |
| | 14. Alternate Quiz 2:Form B: Multiplying and Dividing Fractions* |
| | 15. Length |
| | 16. Weight |
| | 17. Capacity |
| | 18. Quiz 3: The Customary System |
| | 19. Alternate Quiz 3:Form A: The Customary System* |
| | 20. Alternate Quiz 3:Form B: The Customary System* |
| | 21. Special Project* |
| | 22. Review |
| | 23. Test |
| | 24. Alternate Test: Form A* |
| | 25. Alternate Test: Form B* |
| | 26. Glossary and Credits |

| Unit 6: Ratio, Proportion, and Percent | |
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| Assignments | |
| Mathematics 600 | 1. Ratios |
| | 2. Geometry: Circumference |
| | 3. Rates |
| | 4. Quiz 1: Ratios |
| | 5. Alternate Quiz 1:Form A: Ratios* |
| | 6. Alternate Quiz 1:Form B: Ratios* |
| | 7. Proportions |
| | 8. Solving Proportions |
| | 9. Scale Drawings |
| | 10. Project: Make a Scale Drawing |
| | 11. Quiz 2: Proportions |
| | 12. Alternate Quiz 2:Form A: Proportions* |
| | 13. Alternate Quiz 2:Form B: Proportions* |
| | 14. Converting Between Decimals and Percents |
| | 15. Converting Between Fractions and Percents |
| | 16. Data Analysis: Circle Graphs |
| | 17. Percent of a Number |
| | 18. Quiz 3: Percent |
| | 19. Alternate Quiz 3:Form A: Percent* |
| | 20. Alternate Quiz 3:Form B: Percent* |
| | 21. Special Project* |
| | 22. Review |
| | 23. Test |
| | 24. Alternate Test: Form A* |
| | 25. Alternate Test: Form B* |
| | 26. Glossary and Credits |

| Unit 7: Probability and Geometry | |
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| Assignments | |
| Mathematics 600 | 1. Introduction to Probability |
| | 2. Complementary Events |
| | 3. Sample Space |
| | 4. Project: Theoretical vs. Experimental Probability |
| | 5. Quiz 1: Probability |
| | 6. Alternate Quiz 1:Form A: Probability* |
| | 7. Alternate Quiz 1:Form B: Probability* |
| | 8. Introduction to Geometry |
| | 9. Measuring and Classifying Angles |
| | 10. Angle Relationships |
| | 11. Quiz 2: Geometry: Angles |
| | 12. Alternate Quiz 2:Form A: Geometry: Angles* |
| | 13. Alternate Quiz 2:Form B: Geometry: Angles* |
| | 14. Triangles |
| | 15. Quadrilaterals |
| | 16. Polygons |
| | 17. Congruent and Similar Figures |
| | 18. Quiz 3: Geometry: Polygons |
| | 19. Alternate Quiz 3:Form A: Geometry: Polygons* |
| | 20. Alternate Quiz 3:Form B: Geometry: Polygons* |
| | 21. Special Project* |
| | 22. Review |
| | 23. Test |
| | 24. Alternate Test: Form A* |
| | 25. Alternate Test: Form B* |
| | 26. Glossary and Credits |

| Unit 8: Geometry and Measurement | | |
|----------------------------------|--|---|
| Assignments | | |
| Mathematics 600 | 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 | | |
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| Assignments | | |
| Mathematics 600 | 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 | | |
|----------------------------------|---|---|
| Assignments | | |
| Mathematics 600 | 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 | | |
|---------------------------------|--------------------|----------------------------|
| Math 600 | Assignments | |
| | 1. Course Review 1 | 4. Alternate Exam: Form A* |
| | 2. Course Review 2 | 5. Alternate Exam: Form B* |
| | 3. Exam | |

(*) Indicates alternative assignment