



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 rational numbers and the skills needed for algebra. In it, students will gain solid experience with number theory and operations, including decimals and fractions. This course also integrates ratio relationships and proportional reasoning throughout the units, as well as introduces students to geometric and statistical concepts.

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

- Perform all four operations, including division, on whole numbers, decimals, and fractions.
- Convert between fractions, decimals, and percentages.
- Represent ratio and rate relationships using tables of equivalent ratios, double number line diagrams, tape diagrams, equations, and the coordinate plane.
- Solve ratio and rate problems using proportional reasoning.
- Calculate perimeters and areas of regular plane shapes and calculate surface area and volume of right prisms.
- Use the number line to find the absolute value or the opposite of a rational number.
- Simplify variable expressions and solve one-step equations.
- Plot ordered pairs on the coordinate plane.
- Represent data on statistical graphs, including histograms, dot plots, and box plots.
- Recognize and summarize introductory concepts of financial literacy, including funding of educational goals.

Unit 1: Decimals	
Assignments	
Mathematics 600	1. Course Overview
	2. Decimals and Place Value
	3. Comparing and Ordering Decimals
	4. Rounding and Estimating
	5. Adding and Subtracting
	6. Quiz - Decimal Numbers
	7. Alternate Quiz - Form A: Decimal Numbers*
	8. Alternate Quiz - Form B: Decimal Numbers*
	9. The Distributive Property and Multiplying
	10. Multiplying by Whole Numbers
	11. Multiplying by Decimals
	12. Project: Decimals Performance Task A
	13. Quiz: Multiplying Whole Numbers and Decimals
	14. Alternate Quiz —Form A: Multiplying Whole Numbers and Decimals*
	15. Alternate Quiz —Form B: Multiplying Whole Numbers and Decimals*
	16. Dividing
	17. Dividing by Whole Numbers
	18. Multiplying and Dividing by Powers of Ten
	19. Dividing by Decimals
	20. Converting Metric Units
	21. Project: Decimals Performance Task B
	22. Quiz: Dividing, Powers of Ten, and Metric Units
	23. Alternate Quiz—Form A: Dividing, Powers of Ten, and Metric Units
	24. Alternate Quiz—Form B: Dividing, Powers of Ten, and Metric Units
	25. Alternate Quiz—Form B: Dividing, Powers of Ten, and Metric Units
	26. Special Project*
	27. Review
	28. Test
	29. Test
	30. Alternate Test - Form A*
	31. Alternate Test - Form B*
	32. Glossary and Credits

Unit 2: Fractions	
Assignments	
Mathematics 600	1. Divisibility and Prime Factorization
	2. Greatest Common Factor
	3. Fractions
	4. Equivalent Fractions
	5. Quiz: Factors and Fractions
	6. Alternate Quiz—Form A: Factors and Fractions*
	7. Alternate Quiz—Form B: Factors and Fractions*
	8. Least Common Multiple
	9. Project: Fractions Performance Task A
	10. Comparing and Ordering Fractions
	11. Improper Fractions and Mixed Numbers
	12. Fractions and Decimals
	13. Quiz: The LCM and Fractions
	14. Alternate Quiz—Form A: The LCM and Fractions*
	15. Alternate Quiz—Form B: The LCM and Fractions*
	16. Estimating with Fractions
	17. Multiplying Fractions
	18. Multiplying Mixed Numbers
	19. Project: Fractions Performance Task B
	20. Quiz: Estimating and Multiplying Fractions
	21. Alternate Quiz—Form A: Estimating and Multiplying Fractions*
	22. Alternate Quiz—Form B: Estimating and Multiplying Fractions*
	23. Special Project*
	24. Review
	25. Test
	26. Alternate Test—Form A*
	27. Alternate Test—Form B*
	28. Glossary and Credits

Unit 3: Dividing Fractions	
Assignments	
Mathematics 600	1. Dividing with Unit Fractions
	2. Dividing Whole Numbers by Fractions
	3. Dividing Fractions by Whole Numbers
	4. Dividing Fractions by Fractions
	5. Project: Dividing Fractions Performance Task A
	6. Quiz: Dividing with Fractions Using a Visual Model
	7. Alternate Quiz—Form A: Dividing with Fractions Using a Visual Model*
	8. Alternate Quiz—Form B: Dividing with Fractions Using a Visual Model*
	9. Dividing Fractions
	10. Dividing Mixed Numbers
	11. Division in Real Life
	12. Project: Dividing Fractions Performance Task B
	13. Quiz: Dividing Fractions Using an Equation
	14. Alternate Quiz—Form A: Dividing Fractions Using an Equation*
	15. Alternate Quiz—Form B: Dividing Fractions Using an Equation*
	16. Special Project*
	17. Review
	18. Test
	19. Alternate Test—Form A*
	20. Alternate Test—Form B*
	21. Glossary and Credits

Unit 4: Ratios	
Assignments	
Mathematics 600	1. Ratios
	2. Equivalent Ratios
	3. Solving Ratio Problems
	4. More Ratio Problems
	5. Project: Ratios Performance Task A
	6. Quiz: Introduction to Ratios
	7. Alternate Quiz—Form A: Introduction to Ratios*
	8. Alternate Quiz—Form B: Introduction to Ratios*
	9. The Value of a Ratio
	10. Comparing Ratios
	11. Double Number Lines
	12. Equations
	13. Project: Ratios Performance Task B
	14. Quiz: Using the Value of a Ratio
	15. Alternate Quiz—Form A: Using the Value of a Ratio*
	16. Alternate Quiz—Form B: Using the Value of a Ratio*
	17. Special Project*
	18. Review
	19. Test
	20. Alternate Test—Form A*
	21. Alternate Test—Form B*
	22. Glossary and Credits

Unit 5: Rates and Percent	
Assignments	
1. Rates	15. Percents and Decimals
2. Rates and Ratios	16. Percent of a Number
3. Solving Rate Problems	17. Solving Percent Problems
4. Quiz: Rates	18. Project: Job, Salary, and Lifetime Income
5. Alternate Quiz—Form A: Rates*	19. Project: Rates and Percent Performance Task B
6. Alternate Quiz—Form B: Rates*	20. Quiz: Percents
7. Converting Measurement	21. Alternate Quiz—Form A: Percents*
8. Comparison Shopping	22. Alternate Quiz—Form B: Percents*
9. Speed and Work Problems	23. Special Project*
10. Project: Rates and Percent Performance Task A	24. Review
11. Quiz: Applying Ratios and Rates	25. Test
12. Alternate Quiz —Form A: Applying Ratios and Rates*	26. Alternate Test—Form A*
13. Alternate Quiz —Form B: Applying Ratios and Rates*	27. Alternate Test—Form B*
14. Percents and Fractions	28. Glossary and Credits

Unit 6: Geometry and Measure	
Assignments	
1. Polygons	16. Surface Area of Triangular Prisms
2. Area of a Parallelogram	17. Surface Area of Pyramids
3. Area of Triangles	18. Project: Geometry and Measurement Performance Task B
4. Area of Composite Figures	19. Quiz: Solid Figures and Surface Area
5. Project: Geometry and Measurement Performance Task A	20. Alternate Quiz —Form A: Solid Figures and Surface Area*
6. Quiz: Plane Figures	21. Alternate Quiz —Form B: Solid Figures and Surface Area*
7. Alternate Quiz —Form A: Plane Figures*	22. Special Project*
8. Alternate Quiz —Form B: Plane Figures*	23. Review
9. Solid Figures	24. Test
10. Volume	25. Alternate Test—Form A*
11. More Volume	26. Alternate Test—Form B*
12. Quiz: Solid Figures and Volume	27. Glossary and Credits
13. Alternate Quiz —Form A: Solid Figures and Volume*	28. Surface Area of Rectangular Prisms
14. Alternate Quiz —Form B: Solid Figures and Volume*	
15. Surface Area of Rectangular Prisms	

Unit 7: Rational Numbers	
Assignments	
1. Integers	16. The Coordinate Plane
2. Integers in Real Life	17. Reflections on the Coordinate Plane
3. The Opposite of a Number	18. Distance on the Coordinate Plane
4. Rational Numbers	19. Polygons on the Coordinate Plane
5. Quiz: Rational Numbers	20. Project: Rational Numbers Performance Task B
6. Alternate Quiz —Form A: Rational Numbers*	21. Quiz : The Coordinate Plane
7. Alternate Quiz —Form B: Rational Numbers*	22. Alternate Quiz —Form A: The Coordinate Plane*
8. Comparing Integers and Rational Numbers	23. Alternate Quiz —Form B: The Coordinate Plane*
9. Ordering Integers and Rational Numbers	24. Special Project*
10. Absolute Value	25. Review
11. Ordering and Absolute Value in Real Life	26. Test
12. Project: Rational Numbers Performance Task A	27. Alternate Test—Form A*
13. Quiz: Comparing, Ordering, and Absolute Value	28. Alternate Test—Form B*
14. Alternate Quiz —Form A: Comparing, Ordering, and Absolute Value*	29. Glossary and Credits
15. Alternate Quiz —Form B: Comparing, Ordering, and Absolute Value*	

Unit 8: Numerical and Algebraic Expressions	
Assignments	
1. Real Number Properties	15. Alternate Quiz —Form B: Algebraic Expressions*
2. Exponents	16. The Distributive Property
3. Squares, Cubes, and Roots	17. Factoring Expressions
4. Order of Operations	18. Project: Numerical and Algebraic Expressions Performance Task B
5. Project: Numerical and Algebraic Expressions Performance Task A	19. Equations and Mental Math
6. Quiz : Numerical Expressions	20. Quiz: Expressions and Equations
7. Alternate Quiz —Form A: Numerical Expressions*	21. Alternate Quiz —Form A: Expressions and Equations*
8. Alternate Quiz —Form B: Numerical Expressions*	22. Alternate Quiz —Form B: Expressions and Equations*
9. Variables	23. Special Project*
10. Expressions	24. Review
11. Simplifying Algebraic Expressions	25. Test
12. More Simplifying Algebraic Expressions	26. Alternate Test—Form A*
13. Quiz: Algebraic Expressions	27. Alternate Test—Form B*
14. Alternate Quiz —Form A: Algebraic Expressions*	28. Glossary and Credits

Unit 9: Equations and Functions	
Assignments	
Mathematics 600	1. Equations
	2. Writing Equations
	3. Addition Equations
	4. Subtraction Equations
	5. Problem Set - Subtraction
	6. Quiz : Equations
	7. Alternate Quiz —Form A: Equations*
	8. Alternate Quiz —Form B: Equations*
	9. Multiplication Equations
	10. Division Equations
	11. Inequalities
	12. Graphing Inequalities
	13. Project: Equations and Functions Performance Task A
	14. Quiz: More Equations and Inequalities
	15. Alternate Quiz —Form A: More Equations and Inequalities*
	16. Alternate Quiz —Form B: More Equations and Inequalities*
	17. Functions
	18. Function Rules
	19. Graphing Functions
	20. Proportional Relationships
	21. Project: Equations and Functions Performance Task B
	22. Quiz: Functions
	23. Alternate Quiz —Form A: Functions*
	24. Alternate Quiz —Form B: Functions*
	25. Special Project*
	26. Review
	27. Test
	28. Alternate Test—Form A*
	29. Alternate Test—Form B*
	30. Glossary and Credits

Unit 10: Data Analysis	
Assignments	
Mathematics 600	1. Collecting Data and the Mean
	2. Median, Mode, and Range
	3. Describing Data
	4. Mean Absolute Deviation
	5. Project: Data Analysis Performance Task A
	6. Quiz: Collecting and Describing Data
	7. Alternate Quiz —Form A: Collecting and Describing Data*
	8. Alternate Quiz —Form B: Collecting and Describing Data*
	9. Frequency Tables
	10. Histograms
	11. Dot Plots
	12. Stem-and-Leaf Plots
	13. Quiz: Organizing Data
	14. Alternate Quiz —Form A: Organizing Data*
	15. Alternate Quiz —Form B: Organizing Data*
	16. Box Plots
	17. More Box Plots
	18. Summarizing Data Sets
	19. Project: Paying for College
	20. Project: Data Analysis Performance Task B
	21. Quiz: Displaying and Interpreting Data
	22. Alternate Quiz —Form A: Displaying and Interpreting Data*
	23. Alternate Quiz —Form B: Displaying and Interpreting Data*
	24. Special Project*
	25. Review
	26. Test
	27. Alternate Test—Form A*
	28. Alternate Test—Form B*
	29. Glossary and Credits

Unit 11: Course Review and Exam	
Assignments	
Math 600	1. Course Review 1
	2. Course Review 2
	3. Exam
	4. Alternate Exam—Form A*
	5. Alternate Exam—Form B*
	6. Alternate Exam—Form C*

(*) Indicates alternative assignment