

CURRICULUM OVERVIEW

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.

- **Unit 1:** Identify, compare, and calculate problems with decimal numbers
- **Unit 2:** Identify, reduce, compare, and represent fractions
- **Unit 3:** Use division to solve problems involving fractions
- **Unit 4:** Use ratios to solve problems, interpret data, and make comparisons
- **Unit 5:** Use rates and percentages to solve problems
- **Unit 6:** Calculate the measurements of geometric shapes
- **Unit 7:** Identify and use rational numbers and their opposites
- **Unit 8:** Identify, use, and compare expressions
- **Unit 9:** Translate, write, and solve equations involving addition, subtraction, multiplication, and division
- **Unit 10:** Interpret and describe data presented in various graphs
- **Unit 11:** Review skills and concepts from throughout the course

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

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

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

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

Unit 5: Rates and Percent		
Mathematics 600	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
Mathematics 600	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

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

Unit 10: Data Analysis

Assignments

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

Unit 11: Course Review and Exam

Assignments

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|----|-----------------|----|------------------------|
| 1. | Course Review 1 | 4. | Alternate Exam—Form A* |
| 2. | Course Review 2 | 5. | Alternate Exam—Form B* |
| 3. | Exam | 6. | Alternate Exam—Form C* |

(*) Indicates alternative assignment