

Mathematics

Mathematics 600 Fundamentals

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	
Assignments	
Mathematics 600 Fundamentals	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
	Patterns*
	14. Alternate Quiz 2:Form B: Operations and Number
	Patterns*
	15. Variables
	16. Expressions
	17. Variable Expressions
	18. Equations and Mental Math
	19. Quiz 3: Algebra
	20. Alternate Quiz 3:Form A: Algebra*
	21. Alternate Quiz 3:Form B: Algebra*
	22. Special Project*
	23. Review
24. Test	
25. Alternate Test: Form A*	
26. Alternate Test: Form B*	
27. Glossary and Credits	

Unit 2: Data Analysis	
Mathematics 600 Fundamentals	Assignments
	1. Collecting Data and the Mean
	2. Median, Mode, and Range
	3. Describing Data
	4. Quiz 1: Collecting and Describing Data
	5. Alternate Quiz 1:Form A: Collecting and Describing
	6. Data*
	7. Alternate Quiz 1:Form B: Collecting and Describing
	8. Data*
	9. Frequency Tables
	10. Histograms
	11. Line Plots
	12. Stem-and-Leaf Plots
	13. Quiz 2: Organizing Data
	14. Alternate Quiz 2:Form A: Organizing Data*
15. Alternate Quiz 2:Form B: Organizing Data*	
14. Bar Graphs	
Line Graphs	
15. Venn Diagrams	
16. Vertex-Edge Graphs	
17. Quiz 3: Displaying and Interpreting Data	
18. Alternate Quiz 3:Form A: Displaying and	
19. Interpreting Data*	
20. Alternate Quiz 3:Form B: Displaying and	
21. Interpreting Data*	
22. Special Project*	
23. Review	
24. Test	
25. Alternate Test: Form A*	
26. Alternate Test: Form B*	
27. Glossary and Credits	

Unit 3: Decimals	
Mathematics 600 Fundamentals	Assignments
	1. Decimals and Place Value
	2. Ordering and Comparing
	3. Rounding and Estimating
	4. Adding and Subtracting
	5. Quiz 1: Decimal Numbers
	6. Alternate Quiz 1:Form A: Decimal Numbers*
	7. Alternate Quiz 1:Form B: Decimal Numbers*
	8. Multiplying by Whole Numbers
	9. Multiplying by Decimals
	10. Dividing by Whole Numbers
	11. Dividing by Decimals
	12. Quiz 2: Multiplying and Dividing Decimal Numbers
	13. Alternate Quiz 2:Form A: Multiplying and Dividing Decimal Numbers*
	14. Alternate Quiz 2:Form B: Multiplying and Dividing Decimals and Place Value
15. Length	
16. Mass and Capacity	
17. Multiplying and Dividing by Powers of Ten	
18. Converting Metric Units	
19. Quiz 3: The Metric System	
20. Alternate Quiz 3:Form A: The Metric System*	
21. Alternate Quiz 3:Form B: The Metric System*	
22. Special Project*	
23. Review	
24. Test	
25. Alternate Test: Form A*	
26. Alternate Test: Form B*	
27. Glossary and Credits	

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

Unit 5: Fraction Operations	
Assignments	
Mathematics 600 Fundamentals	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	
Assignments	
Mathematics 600 Fundamentals	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	
Assignments	
Mathematics 600 Fundamentals	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	
600 Math 600 Math	1. Perimeter
	2. Area of Parallelograms
	3. Area of Triangles
	4. Area of Composite Figures
	5. Area of Circles
	6. Project: Estimating Area
	7. Quiz 1: Plane Figures
	8. Alternate Quiz 1:Form A: Plane Figures*
	9. Alternate Quiz 1:Form B: Plane Figures*
	10. Solid Figures
	11. Surface Area of Rectangular Prisms
	12. Volume of Rectangular Prisms
13. Finding Missing Dimensions	
14. Project: Triangular Prisms	
15. Quiz 2: Solid Figures	
16. Alternate Quiz 2:Form A: Solid Figures*	
17. Alternate Quiz 2:Form B: Solid Figures*	
18. Special Project*	
19. Review	
20. Test	
21. Alternate Test: Form A*	
22. Alternate Test: Form B*	
23. Glossary and Credits	

Unit 9: Integers and Transformations	
Assignments	
600 Funda ment als 600	1. Integers
	2. Comparing and Ordering Integers
	3. Absolute Value
	4. Coordinate Plane
	5. Quiz 1: Integers
	6. Alternate Quiz 1:Form A: Integers*
	7. Alternate Quiz 1:Form B: Integers*
	8. Addition
	9. Subtraction
	11. Division
	12. Quiz 2: Integer Operations
	13. Alternate Quiz 2:Form A: Integer Operations*
14. Alternate Quiz 2:Form B: Integer Operations*	
15. Translations	
16. Reflections and Rotations	
17. Line Symmetry	
18. Quiz 3: Transformations	
19. Alternate Quiz 3:Form A: Transformations*	
20. Alternate Quiz 3:Form B: Transformations*	
21. Special Project*	
22. Review	
23. Test	
24. Alternate Test: Form A*	
25. Alternate Test: Form B*	
26. Glossary and Credits	

Unit 10: Equations and Functions	
Assignments	
600 Funda mental 600 Math 600 Math	1. Equations
	2. Writing Equations
	3. Addition Equations
	4. Subtraction Equations
	5. Quiz 1: Equations
	6. Alternate Quiz 1:Form A: Equations*
	7. Alternate Quiz 1:Form B: Equations*
	8. Multiplication Equations
	9. Division Equations
	10. Inequalities
	11. Graphing Inequalities
	12. Quiz 2: More Equations and Inequalities
13. Alternate Quiz 2:Form A: More Equations and Inequalities*	
14. Alternate Quiz 2:Form B: More Equations and Inequalities*	
15. Functions	
16. Function Rules	
17. Graphing Functions	
18. Quiz 3: Functions	
19. Alternate Quiz 3:Form A: Functions*	
20. Alternate Quiz 3:Form B: Functions*	
21. Special Project*	
22. Review	
23. Test	
24. Alternate Test: Form A*	
25. Alternate Test: Form B*	
26. Glossary and Credits	

Unit 11: Course Review and Exam	
Assignments	
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	2. Course Review 2
	3. Exam
	4. Alternate Exam: Form A*
	5. Alternate Exam: Form B*