



Switched-On
SCHOOLHOUSE

Course 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 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				
Assignment Titles				
MATHEMATICS 600	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				
MATHEMATICS 600	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	
MATHEMATICS 600	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 Decimal Numbers*
	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	
Assignment Titles	
MATHEMATICS 600	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	
Assignment Titles	
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

MATHEMATICS
600

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

MATHEMATICS
600

Assignment Titles

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|--|--|
| 1. Introduction to Probability | 14. Triangles |
| 2. Complementary 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

MATHEMATICS
600

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		
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		
Assignment Titles		
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		
Assignment Titles		
MATHEMATICS 600	1. Course Review 1	4. Alternate Exam: Form A*
	2. Course Review 2	5. Alternate Exam: Form B*
	3. Exam	

(*) Indicates alternate assignment