



2017-2018 Curriculum Catalog

Mathematics 500

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Mathematics 500 Course Overview

Math 500 is a full-year elementary math course focusing on number skills, mathematical literacy, and geometric concepts. Students will gain solid experience with number theory and operations, including whole numbers, decimals, and fractions. In addition, students will develop their understanding of measurement and two- and three-dimensional figures. This course also integrates mathematical practices throughout the units, as well as introducing students to algebraic, statistical, and probability concepts.

In this course, students will be taught the following:

Place Value, Addition, and Subtraction

- Adding and subtracting of decimals and fractions
- Comparing and ordering whole numbers
- Determining rules for number patterns
- Mental math
- Rounding and estimating

Multiplying Whole Numbers and Decimals

- Estimating whole number products
- Multiplying decimals
- Multiplying whole numbers
- Properties of multiplication

Dividing Whole Numbers and Decimals

- Dividing with money
- Dividing whole numbers and decimals
- Estimating quotients
- Interpreting remainders

Algebra and Graphing

- Coordinate plane
- Expressions
- Graphing functions
- Integers
- Numerical patterns in tables and graphs
- Order of operations
- Scatterplots

Measurement

- Capacity
- Density
- Length
- Mass
- Time and temperature
- The Metric System
- Weight

Factors and Fractions

- Comparing fractions and decimals
- Equivalent fractions
- Factors
- Fractions
- Greatest Common Factor/Least Common Multiple
- Improper fractions and mixed numbers
- Prime factorization
- Rounding fractions
- Simplifying fractions

Fraction Operations

- Adding and subtracting fractions
- Adding and subtracting mixed numbers
- Estimating sums and differences
- Multiplying mixed numbers
- Multiplying whole numbers and fractions

Data Analysis and Probability

- Bar/Line Graphs
- Choosing the right graph
- Collecting data and frequency tables
- Line plots
- Listing outcomes
- Making predictions
- Measures of central tendency
- Probability
- Stem-and-Leaf plots

Geometry

- Angles
- Circles
- Geometry terms
- Polygons
- Quadrilaterals
- Making predictions
- Similar and congruent figures
- Solid figures
- Symmetry
- Transformations
- Triangles

Perimeter, Area, and Volume

- Perimeter, Area, and Volume
- Area
- Circumference
- Parallelograms
- Polygons
- Regular polygons
- Squares and rectangles
- Surface area
- Triangles
- Volume

Financial Literacy

- Exploring your finances

Unit 1: Place Value, Addition, and Subtraction	
Assignments	
1. Course Overview	16. Adding Decimal Numbers
2. Whole Number Place Value	17. Determining Rules to Generate Number Patterns
3. Comparing and Ordering Whole Numbers	18. Subtracting Decimal Numbers
4. Decimal Number Place Value	19. Exploring Your Finances
5. Comparing and Ordering Decimal Numbers	20. Project: Logical Reasoning
6. Quiz: Place Value	21. Quiz: Addition and Subtraction
7. Alternate Quiz - Form A: Place Value*	22. Alternate Quiz - Form A: Addition and Subtraction*
8. Alternate Quiz - Form B: Place Value*	23. Alternate Quiz - Form B: Addition and Subtraction*
9. Rounding Whole Numbers and Decimals	24. Special Project*
10. Estimating Sums and Differences	25. Review
11. Add and Subtract Mentally	26. Test
12. Quiz: Rounding and Estimating	27. Alternate Test - Form A*
13. Alternate Quiz - Form A: Rounding and Estimating*	28. Alternate Test - Form B*
14. Alternate Quiz – Form B: Rounding and Estimating*	29. Glossary and Credits
15. Adding and Subtracting Whole Numbers	

Unit 2: Multiplying Whole Numbers and Decimals	
Assignments	
1. Estimating Whole Number Products	14. Estimating Decimal Products
2. Properties of Multiplication	15. Multiplying Whole Numbers by Decimals
3. Multiplying Whole Numbers	16. Multiplying Decimals by Decimals
4. Quiz: Multiplying Whole Numbers	17. Solving Multiplication Problems
5. Alternate Quiz —Form A: Multiplying Whole Numbers*	18. Quiz: Multiplying Decimal Numbers
6. Alternate Quiz —Form B: Multiplying Whole Numbers*	19. Alternate Quiz —Form A: Multiplying Decimal Numbers*
7. Exponents	20. Alternate Quiz —Form B: Multiplying Decimal Numbers*
8. Multiplying Whole Numbers by Powers of Ten	21. Special Project*
9. Project: How Much is a Million	22. Review
10. Multiplying Decimals by Powers of Ten	23. Test
11. Quiz: Powers	24. Alternate Test—Form A*
12. Alternate Quiz —Form A: Powers*	25. Alternate Test—Form B *
13. Alternate Quiz —Form B: Powers*	26. Glossary and Credits

Unit 3: Dividing Whole Numbers and Decimals	
Assignments	
Mathematics 500	1. Understanding Division
	2. Estimating Quotients
	3. Dividing Whole Numbers
	4. Remainders
	5. Quiz: One-Digit Divisors
	6. Alternate Quiz —Form A: One-Digit Divisors*
	7. Alternate Quiz —Form B: One-Digit Divisors*
	8. Dividing by Multiples of Ten
	9. Dividing Whole Numbers I
	10. Dividing Whole Numbers II
	11. Interpreting the Remainder
	12. Quiz: Two-Digit Divisors
	13. Alternate Quiz —Form A: Two-Digit Divisors*
14. Alternate Quiz —Form B: Two-Digit Divisors*	
15. Dividing by Powers of Ten	
16. Dividing Decimals by Whole Numbers	
17. Dividing with Money	
18. Quiz : Decimal Division	
19. Alternate Quiz —Form A: Decimal Division*	
20. Alternate Quiz —Form B: Decimal Division*	
21. Special Project*	
22. Review	
23. Test	
24. Alternate Test—Form A*	
25. Alternate Test—Form B*	
26. Glossary and Credits	

Unit 4: Algebra and Graphing	
Assignments	
Mathematics 500	1. Addition and Subtraction Expressions
	2. Multiplication and Division Expressions
	3. The Order of Operations
	4. Quiz: Expressions
	5. Alternate Quiz —Form A: Expressions*
	6. Alternate Quiz —Form B: Expressions*
	7. Addition and Subtraction Equations
	8. Multiplication Equations
	9. Functions
	10. Numerical Patterns
	11. Project: Patterns
	12. Quiz: Patterns, Functions, and Equations
	13. Alternate Quiz —Form A: Patterns, Functions, and Equations*
	14. Alternate Quiz —Form B: Patterns, Functions, and Equations*
15. The Coordinate Plane	
16. Graphing Functions	
17. Interpreting Graphs	
18. Scatterplots	
19. Numerical Patterns in a Table/Graph	
20. Integers	
21. Quiz: Graphing	
22. Alternate Quiz —Form A: Graphing*	
23. Alternate Quiz —Form B: Graphing*	
24. Special Project*	
25. Review	
26. Test	
27. Alternate Test—Form A*	
28. Alternate Test—Form B*	
29. Glossary and Credits	

Unit 5: Measurement	
Assignments	
Mathematics 500	1. The Metric System
	2. Length
	3. Mass
	4. Capacity
	5. Quiz: The Metric System
	6. Alternate Quiz —Form A: The Metric System*
	7. Alternate Quiz —Form B: The Metric System*
	8. Length
	9. Weight
	10. Capacity
	11. Project: Density
	12. Quiz: The Customary System
	13. Alternate Quiz —Form A: The Customary System*
14. Alternate Quiz —Form B: The Customary System*	
15. Time	
16. Elapsed Time	
17. Temperature	
18. Quiz : Time and Temperature	
19. Alternate Quiz —Form A: Time and Temperature*	
20. Alternate Quiz —Form B: Time and Temperature*	
21. Special Project*	
22. Review	
23. Test	
24. Alternate Test—Form A*	
25. Alternate Test—Form B*	
26. Glossary and Credits	

Unit 6: Factors and Fractions	
Assignments	
Mathematics 500	1. Factors
	2. Prime Factorization
	3. Greatest Common Factor
	4. Quiz: Factors
	5. Alternate Quiz —Form A: Factors*
	6. Alternate Quiz —Form B: Factors*
	7. Fractions
	8. Improper Fractions and Mixed Numbers
	9. Simplifying Fractions
	10. Equivalent Fractions
	11. Quiz: Equivalent Fractions
	12. Alternate Quiz —Form A: Equivalent Fractions*
	13. Alternate Quiz —Form B: Equivalent Fractions*
14. Least Common Multiple	
15. Comparing Fractions	
16. Fractions and Decimals	
17. Rounding Fractions	
18. Quiz: Fractions	
19. Alternate Quiz —Form A: Fractions*	
20. Alternate Quiz —Form B: Fractions*	
21. Special Project*	
22. Review	
23. Test	
24. Alternate Test—Form A*	
25. Alternate Test—Form B*	
26. Glossary and Credits	

Unit 7: Fraction Operations	
Assignments	
Mathematics 500	1. Adding and Subtracting Fractions
	2. Adding and Subtracting Mixed Numbers
	3. Estimating Sums and Differences
	4. Quiz: Like Denominators
	5. Alternate Quiz—Form A: Like Denominators*
	6. Alternate Quiz —Form B: Like Denominators*
	7. Adding Fractions
	8. Subtracting Fractions
	9. Adding Mixed Numbers
	10. Subtracting Mixed Numbers
	11. Quiz: Unlike Denominators
	12. Alternate Quiz —Form A: Unlike Denominators*
	13. Alternate Quiz —Form B: Unlike Denominators*
	14. Multiplying Whole Numbers and Fractions
15. Multiplying Fractions	
16. Multiplying Mixed Numbers	
17. Dividing Fractions	
18. Quiz : Multiplying and Dividing Fractions	
19. Alternate Quiz —Form A: Multiplying and Dividing Fractions*	
20. Alternate Quiz —Form B: Multiplying and Dividing Fractions*	
21. Special Project*	
22. Review	
23. Test	
24. Alternate Test—Form A*	
25. Alternate Test—Form B*	
26. Glossary and Credits	

Unit 8: Data Analysis and Probability	
Assignments	
Mathematics 500	1. Collecting Data and Frequency Tables
	2. Measures of Central Tendency
	3. Line Plots
	4. Stem-and-Leaf Plots
	5. Quiz: Collecting and Analyzing Data
	6. Alternate Quiz —Form A: Collecting and Analyzing Data*
	7. Alternate Quiz —Form B: Collecting and Analyzing Data*
	8. Bar Graphs
	9. Line Graphs
	10. Choosing the Right Graph
	11. Quiz: Displaying Data
	12. Alternate Quiz —Form A: Displaying Data*
13. Alternate Quiz —Form B: Displaying Data*	
14. Probability	
15. Probability as a Fraction	
16. Listing Outcomes	
17. Making Predictions	
18. Quiz : Probability	
19. Alternate Quiz —Form A: Probability*	
20. Alternate Quiz —Form B: Probability*	
21. Special Project*	
22. Review	
23. Test	
24. Alternate Test—Form A*	
25. Alternate Test—Form B*	
26. Glossary and Credits	

Unit 9: Geometry	
Assignments	
Mathematics 500	1. Geometry Terms
	2. Angles
	3. Circles
	4. Quiz: Geometry
	5. Alternate Quiz —Form A: Geometry*
	6. Alternate Quiz —Form B: Geometry*
	7. Polygons
	8. Triangles
	9. Quadrilaterals
	10. Solid Figures
	11. Quiz : Classifying Plane and Solid Figures
	12. Alternate Quiz —Form A: Classifying Plane and Solid Figures*
13. Alternate Quiz —Form B: Classifying Plane and Solid Figures*	
14. Similar and Congruent Figures	
15. Transformations	
16. Symmetry	
17. Project: Constructions	
18. Quiz : Transformations and Symmetry	
19. Alternate Quiz —Form A: Transformations and Symmetry*	
20. Alternate Quiz —Form B: Transformations and Symmetry*	
21. Special Project*	
22. Review	
23. Test	
24. Alternate Test—Form A*	
25. Alternate Test—Form B*	
26. Glossary and Credits	

Unit 10: Perimeter, Area, and Volume	
Assignments	
Mathematics 500	1. Polygons
	2. Regular Polygons
	3. Circumference
	4. Quiz - Perimeter
	5. Alternate Quiz - Form A: Perimeter*
	6. Alternate Quiz - Form B: Perimeter*
	7. Area
	8. Squares and Rectangles
	9. Parallelograms
	10. Triangles
	11. Quiz - Area
	12. Alternate Quiz - Form A: Area*
13. Alternate Quiz - Form B: Area*	
14. Surface Area	
15. Volume	
16. Solving Volume Problems	
17. Project: Solid Figures	
18. Quiz - Solid Figures	
19. Alternate Quiz - Form A: Solid Figures*	
20. Alternate Quiz - Form B: Solid Figures*	
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	
Math 500	Assignments
	1. Course Review 1
	2. Course Review 2
	3. Exam
	4. Alternate Exam - Form A*
	5. Alternate Exam - Form B*

(*) Indicates alternative assignment