



Switched-On
SCHOOLHOUSE

2015 Curriculum Catalog

Mathematics 400

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COURSE OVERVIEW

Math 400 is a full-year elementary math course focusing on number skills and numerical literacy. 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, teaches measurement skills, and introduces students to statistical concepts.

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

- Perform all four operations on whole numbers.
- Compare and order numbers, using place value and rounding.
- Add and subtract fractions and decimals.
- Understand measurement concepts, including the metric system.
- Calculate perimeters and areas of regular plane shapes.
- Represent data on varied statistical charts.

| UNIT 1: NUMBER SENSE AND PLACE VALUE | | | | |
|--------------------------------------|-----|------------------------------|-----|-------------------------------|
| Assignment Titles | | | | |
| MATHEMATICS 400 | 1. | Course Overview | 16. | Quiz 3 |
| | 2. | Place Value to 1,000s | 17. | Reading and Writing Fractions |
| | 3. | Single-Digit Addition | 18. | Practice Multiplication |
| | 4. | Single-Digit Subtraction | 19. | Counting Money |
| | 5. | Multi-Digit Addition | 20. | Operations |
| | 6. | Multi-Digit Subtraction | 21. | Quiz 4 |
| | 7. | Review Place Value to 1,000s | 22. | Review: Numbers |
| | 8. | Quiz 1 | 23. | Story Problems |
| | 9. | Multiplication Facts | 24. | Quiz 5 |
| | 10. | Family of Facts | 25. | Special Project |
| | 11. | Telling Time | 26. | Review Game |
| | 12. | Quiz 2 | 27. | Test |
| | 13. | Number Words | 28. | Alternate Test* |
| | 14. | Patterns | 29. | Reference |
| | 15. | Cardinal and Ordinal Numbers | 30. | |

| UNIT 2: ROUNDING AND ESTIMATION | | | | |
|---------------------------------|-----|---------------------------------------|-----|----------------------------------|
| Assignment Titles | | | | |
| MATHEMATICS 400 | 1. | Operations | 15. | Equivalent Fractions |
| | 2. | Multiplication Facts: 6-10 and Review | 16. | Rounding Numbers to 100s |
| | 3. | Using Standard Measures | 17. | Estimating Answers to 100s |
| | 4. | Quiz 1 | 18. | Review: Computation |
| | 5. | Place Value to 10,000s | 19. | Quiz 4 |
| | 6. | Relation Symbols | 20. | Review: Bar Graphs and Fractions |
| | 7. | Missing Number Equations | 21. | Review: Fractions |
| | 8. | Review: Even and Odd Numbers | 22. | Quiz 5 |
| | 9. | Quiz 2 | 23. | Special Project* |
| | 10. | Adding and Subtracting Fractions | 24. | Review Game |
| | 11. | Rounding Numbers to 10s | 25. | Test |
| | 12. | Estimating Answers to 10s | 26. | Alternate Test* |
| | 13. | Review: Math Symbols | 27. | Reference |
| | 14. | Quiz 3 | | |

| UNIT 3: WHOLE NUMBERS AND FRACTIONS | | |
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| Assignment Titles | | |
| MATHEMATICS 400 | 1. Place Value | 15. Quiz 3 |
| | 2. Rounding Numbers to 10s, 100s, and 1,000s | 16. Equivalent Fractions |
| | 3. Multiply with Carrying to 10s | 17. Learn Numbers to 100,000s |
| | 4. Multiplication Practice | 18. Equations |
| | 5. Quiz 1 | 19. Quiz 4 |
| | 6. Multi-Digit Addition and Subtraction | 20. Reading and Solving Story Problems |
| | 7. Rounding and Estimating | 21. Line Graphs |
| | 8. Fractions Equal to Whole Numbers | 22. Quiz 5 |
| | 9. Quiz 2 | 23. Special Project* |
| | 10. Estimate Answers to 1,000s | 24. Review Game |
| | 11. Relation Symbols | 25. Test |
| | 12. Fractions | 26. Alternate Test* |
| | 13. Add and Subtract to 10,000s | 27. Reference |
| | 14. Check Your Answers | |

| UNIT 4: LINES AND SHAPES | | |
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| Assignment Titles | | |
| MATHEMATICS 400 | 1. Plane and Solid Shapes | 12. Missing Number Problems |
| | 2. Quiz 1 | 13. Review: Operation and Relation Symbols |
| | 3. Practice Addition and Subtraction | 14. Quiz 4 |
| | 4. Place Value and Rounding | 15. Review: Expanded Notation and Estimation |
| | 5. Multiply with Carrying to 100s | 16. Review: Fractions and Place Value |
| | 6. Quiz 2 | 17. Quiz 5 |
| | 7. Lines, Segments, End Points, Rays, Angles | 18. Special Project* |
| | 8. Lines, Directions, and Maps | 19. Review Game |
| | 9. Quiz 3 | 20. Test |
| | 10. Review: Plane and Solid Shapes | 21. Alternate Test* |
| | 11. Fractions | 22. Reference |

| UNIT 5: DIVISION AND MEASUREMENT | | |
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| Assignment Titles | | |
| MATHEMATICS 400 | 1. Introduction to Division | 14. Quiz 3 |
| | 2. Multiplication | 15. Missing Number Problems |
| | 3. Addition and Subtraction | 16. Division Practice |
| | 4. Review: Time and Number Sense | 17. Roman Numerals |
| | 5. Quiz 1 | 18. Review: Regrouping |
| | 6. Linear Measurement | 19. Quiz 4 |
| | 7. Capacity (Dry and Liquid Measurement) | 20. Patterns |
| | 8. Division Facts | 21. Quiz 5 |
| | 9. Review: Multiplication | 22. Special Project* |
| | 10. Quiz 2 | 23. Review Game |
| | 11. Reading a Calendar | 24. Test |
| | 12. Perimeter and Area | 25. Alternate Test* |
| | 13. Finding Perimeter and Area | 26. Reference |

| UNIT 6: MULTIPLICATION AND FRACTIONS | | | | |
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| Assignment Titles | | | | |
| MATHEMATICS 400 | 1. | Prime and Composite Numbers | 13. | Equivalent Fractions |
| | 2. | Multiples | 14. | Review: Rounding and Shapes |
| | 3. | Division with Remainders | 15. | Quiz 4 |
| | 4. | Quiz 1 | 16. | Factors and Multiples |
| | 5. | Equations and Grouping | 17. | Problem Solving with Equations |
| | 6. | Proper and Improper Fractions | 18. | Quiz 5 |
| | 7. | Quiz 2 | 19. | Special Project* |
| | 8. | Multiplication Facts For 11 and 12 | 20. | Review Game |
| | 9. | Fractions and Mixed Numbers | 21. | Test |
| | 10. | Review: Division and Roman Numerals | 22. | Alternate Test* |
| | 11. | Quiz 3 | 23. | Reference |
| | 12. | Measurements | | |

| UNIT 7: FRACTIONS AND PATTERNS | | | | |
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| Assignment Titles | | | | |
| MATHEMATICS 400 | 1. | Multiplication and Division | 13. | Review: Shapes, Perimeter, and Area |
| | 2. | Factors, Multiples, and Variables | 14. | Fractions and Patterns |
| | 3. | Fractions | 15. | Practice: Operations and Money |
| | 4. | Quiz 1 | 16. | Quiz 4 |
| | 5. | Multiplication and Fractions | 17. | Review: Cardinal and Ordinal Numbers |
| | 6. | Average and Number Rules | 18. | Quiz 5 |
| | 7. | Review: Measurement and Place Value | 19. | Special Project* |
| | 8. | Quiz 2 | 20. | Review Game |
| | 9. | Fractions | 21. | Test |
| | 10. | Missing Number Problems | 22. | Alternate Test* |
| | 11. | Quiz 3 | 23. | Reference |
| | 12. | Rounding Numbers and Place Value | | |

| UNIT 8: DIVISION AND FRACTIONS | | | | |
|--------------------------------|-----|----------------------------------|-----|--|
| Assignment Titles | | | | |
| MATHEMATICS 400 | 1. | Factoring and Place Value | 13. | Fractions |
| | 2. | Review: Two-Digit Multiplication | 14. | Review: Time |
| | 3. | Fractions | 15. | Quiz 4 |
| | 4. | Quiz 1 | 16. | Review: Operations and Rounding |
| | 5. | Division | 17. | Review: Roman Numerals, Measurement, and Symbols |
| | 6. | Fractions | 18. | Quiz 5 |
| | 7. | Missing Number Problems | 19. | Special Project* |
| | 8. | Quiz 2 | 20. | Review Game |
| | 9. | Multiplication | 21. | Test |
| | 10. | Division | 22. | Alternate Test* |
| | 11. | Quiz 3 | 23. | Reference |
| | 12. | The Metric System | | |

| UNIT 9: DECIMALS AND FRACTIONS | | | | |
|--------------------------------|-----|---------------------------------------|-----|-------------------|
| Assignment Titles | | | | |
| MATHEMATICS 400 | 1. | Decimals | 13. | Mixed Numbers |
| | 2. | Money | 14. | Sensible Answers |
| | 3. | Multiplication of Whole Numbers | 15. | Quiz 4 |
| | 4. | Quiz 1 | 16. | Review: Fractions |
| | 5. | Ordered Pairs | 17. | Review |
| | 6. | Division and Averages | 18. | Quiz 5 |
| | 7. | Quiz 2 | 19. | Special Project* |
| | 8. | Add and Subtract Decimals | 20. | Review Game |
| | 9. | Fractions with Different Denominators | 21. | Test |
| | 10. | Equivalent Fractions and Decimals | 22. | Alternate Test* |
| | 11. | Quiz 3 | 23. | Reference |
| | 12. | Multiply and Divide | | |

| UNIT 10: GRAPHING AND REVIEW | |
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| Assignment Titles | |
| MATHEMATICS 400 | 1. Data Collection and Random Sampling |
| | 2. Project: Collecting Data |
| | 3. Project: Predicting Data |
| | 4. Graphs |
| | 5. Quiz 1 |
| | 6. Whole Numbers |
| | 7. Decimal Numbers |
| | 8. Quiz 2 |
| | 9. Problem Solving with Fractions |
| | 10. Fractions |
| | 11. Quiz 3 |
| | 12. Sizes, Shapes, and Measurements |
| | 13. Word Problems and Equations |
| | 14. Quiz 4 |
| | 15. Special Project* |
| | 16. Review Game |
| | 17. Test |
| | 18. Alternate Test* |
| | 19. Reference |

(*) Indicates alternate assignment