Math

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## Into Math Table of Contents - Grade 6

| Unit 1: Number Systems and Operations |  |  |
| :---: | :---: | :---: |
|  | Lessons |  |
| Module 1-Integer Concepts | 1.1 | Identify and Interpret Integers |
|  | 1.2 | Compare and Order Integers on a Number Line |
|  | 1.3 | Find and Apply Absolute Value |
|  | Lessons |  |
| Module 2-Rational Number Concepts | 2.1 | Interpret Rational Numbers |
|  | 2.2 | Compare Rational Numbers on a Number Line |
|  | 2.3 | Compare Rational Numbers Using LCM and GCF |
|  | 2.4 | Order Rational Numbers |
|  | Lessons |  |
| Module 3-Fraction Division | 3.1 | Understand Fraction Division |
|  | 3.2 | Explore Division of Fractions with Unlike Denominators |
|  | 3.3 | Explore Division of Mixed Numbers |
|  | 3.4 | Practice and Apply Division of Fractions and Mixed Numbers |
|  | 3.5 | Practice Fraction Operations |
|  | Lessons |  |
| Module 4-Fluency with Multi-Digit Decimal Operations | 4.1 | Add and Subtract Multi-Digit Decimals |
|  | 4.2 | Multiply Multi-Digit Decimals |
|  | 4.3 | Divide Multi-Digit Whole Numbers |
|  | 4.4 | Divide Multi-Digit Decimals |
|  | 4.5 | Apply Operations with Multi-Digit Decimals |
| Unit 2: Ratio and Rate Reasoning |  |  |
|  | Lessons |  |
| Module 5-Ratios and Rates | 5.1 | Understand the Concept and Language of Ratios |
|  | 5.2 | Represent Ratios and Rates with Tables and Graphs |
|  | 5.3 | Compare Ratios and Rates |
|  | 5.4 | Find and Apply Unit Rates |
|  | 5.5 | Solve Ratio and Rate Problems Using Proportional Reasoning |
|  | Lessons |  |
| Module 6-Apply Ratios and Rates to Measurement | 6.1 | Use Ratio Reasoning With Circle Graphs |
|  | 6.2 | Use Rate Reasoning to Convert Within Measurement Systems |
|  | 6.3 | Use Rate Reasoning to Convert Between Measurement Systems |
|  | Lessons |  |
| Module 7-Understand and Apply Percent | 7.1 | Understand, Express, and Compare Percent Ratios |
|  | 7.2 | Use Strategies to Find a Percent of a Quantity |
|  | 7.3 | Solve a Variety of Percent Problems |

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| Unit 3: Expressions, Equations, and Inequalities |  |  |
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|  | Lessons |  |
| Module 8-Numerical and Algebraic Expressions | 8.1 | Understand and Apply Exponents |
|  | 8.2 | Write and Evaluate Numerical Expressions for Situations |
|  | 8.3 | Write Algebraic Expressions to Model Situations |
|  | 8.4 | Interpret and Evaluate Algebraic Expressions |
|  | 8.5 | Identify and Generate Equivalent Algebraic Expressions |
|  | Lessons |  |
| Module 9-Solve Problems Using Equations and Inequalities | 9.1 | Write Equations to Represent Situations |
|  | 9.2 | Use Addition and Subtraction Equations to Solve Problems |
|  | 9.3 | Use Multiplication and Division Equations to Solve Problems |
|  | 9.4 | Use One-Step Equations to Solve a Variety of Problems |
|  | 9.5 | Write and Graph Inequalities |
|  | Lessons |  |
| Module 10-Real-World Relationships Between Variables | 10.1 | Represent Equations in Tables and Graphs |
|  | 10.2 | Write Equations from Verbal Descriptions |
|  | 10.3 | Write Equations from Tables and Graphs |
| Unit 4: Relationships in Geometry |  |  |
|  | Lessons |  |
| Module 11-Polygons on the Coordinate Plane | 11.1 | Graph Rational Numbers on the Coordinate Plane |
|  | 11.2 | Graph Polygons on the Coordinate Plane |
|  | 11.3 | Find Distance on the Coordinate Plane |
|  | 11.4 | Find Perimeter and Area on the Coordinate Plane |
|  | Lessons |  |
| Module 12-Area of Triangles and Special Quadrilaterals | 12.1 | Develop and Use the Formula for Area of Parallelograms |
|  | 12.2 | Develop and Use the Formula for Area of Triangles |
|  | 12.3 | Develop and Use the Formula for Area of Trapezoids |
|  | 12.4 | Find Area of Composite Figures |
|  | Lessons |  |
| Module 13-Surface Area and Volume | 13.1 | Explore Nets and Surface Area |
|  | 13.2 | Find Volume of Rectangular Prisms |
|  | 13.3 | Solve Volume Problems |

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| Unit 5: Data Collection and Analysis |  |  |
| :---: | :---: | :---: |
|  | Lessons |  |
| Module 14-Data Collection and Displays | 14.1 | Explore Statistical Data Collection |
|  | 14.2 | Display Data in Dot Plots |
|  | 14.3 | Make Histograms and Frequency Tables |
|  | Lessons |  |
| Module 15-Measures of Center | 15.1 | Explore Mean as Fair Share |
|  | 15.2 | Find Measures of Center |
|  | 15.3 | Choose a Measure of Center |
|  | Lessons |  |
| Module 16-Variability and Data Distribution | 16.1 | Explore Patterns of Data |
|  | 16.2 | Display Data in Box Plots |
|  | 16.3 | Find Mean Absolute Deviation |
|  | 16.4 | Explore Measures of Variability |
|  | 16.5 | Describe Distributions |

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| Unit 1: Proportional Relationships |  |  |
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|  | Lessons |  |
| Module 1-Identify and Represent Proportional Relationships | 1.1 | Explore Relationships |
|  | 1.2 | Recognize Proportional Relationships in Tables |
|  | 1.3 | Compute Unit Rates Involving Fractions |
|  | 1.4 | Recognize Proportional Relationships in Graphs |
|  | 1.5 | Use Proportional Relationships to Solve Rate Problems |
|  | 1.6 | Practice Proportional Reasoning with Scale Drawings |
|  | Lessons |  |
| Module 2-Proportional Reasoning with Percents | 2.1 | Percent Change |
|  | 2.2 | Markups and Discounts |
|  | 2.3 | Taxes and Gratuities |
|  | 2.4 | Commissions and Fees |
|  | 2.5 | Simple Interest |
| Unit 2: Rational Number Operations |  |  |
|  | Lessons |  |
| Module 3-Understand Addition and Subtraction of Rational Numbers | 3.1 | Add or Subtract a Positive Integer on a Number Line |
|  | 3.2 | Add or Subtract a Negative Integer on a Number Line |
|  | 3.3 | Use a Number Line to Add and Subtract Rational Numbers |
|  | Lessons |  |
| Module 4-Add and Subtract Rational Numbers | 4.1 | Compute Sums of Integers in Context |
|  | 4.2 | Compute Differences of Integers in Context |
|  | 4.3 | Compute Sums and Differences of Rational Numbers in Context |
|  | 4.4 | Apply Properties to Multi-Step Addition and Subtraction Problems |
|  | Lessons |  |
| Module 5-Multiply and Divide Rational Numbers | 5.1 | Understand Multiplication and Division of Rational Numbers |
|  | 5.2 | Multiply Rational Numbers |
|  | 5.3 | Write Fractions as Decimals and Divide Integers |
|  | 5.4 | Multiply and Divide Rational Numbers in Context |
|  | Lessons |  |
| Module 6-Solve Multi-Step Problems Using Rational Numbers | 6.1 | Apply Properties and Strategies to Operate with Rational Numbers |
|  | 6.2 | Estimate to Check Reasonableness |
|  | 6.3 | Solve Multi-Step Problems with Rational Numbers in Context |

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| Unit 3: Model with Expressions, Equations, and Inequalities |  |  |
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|  | Lessons |  |
| Module 7-Solve Problems Using Expressions and Equations | 7.1 | Write Linear Expressions for Situations in Different Forms |
|  | 7.2 | Add, Subtract, and Factor Linear Expressions with Rational Coefficients |
|  | 7.3 | Write Two-Step Equations for Situations |
|  | 7.4 | Apply Two-Step Equations to Solve Real-World Problems |
|  | 7.5 | Apply Two-Step Equations to Find Angle Measures |
|  | Lessons |  |
| Module 8-Solve Problems Using Inequalities | 8.1 | Understand and Apply Properties to Solve One-Step Inequalities |
|  | 8.2 | Write Two-Step Inequalities for Situations |
|  | 8.3 | Apply Two-Step Inequalities to Solve Problems |
| Unit 4: Geometry |  |  |
|  | Lessons |  |
| Module 9-Draw and Analyze Two-Dimensional Figures | 9.1 | Draw Circles and Other Figures |
|  | 9.2 | Draw and Construct Triangles Given Side Lengths |
|  | 9.3 | Draw and Construct Triangles Given Angle Measures |
|  | 9.4 | Draw and Analyze Shapes to Solve Problems |
|  | Lessons |  |
| Module 10-Analyze Figures to Find Circumference and Area | 10.1 | Derive and Apply Formulas for Circumference |
|  | 10.2 | Derive and Apply a Formula for the Area of a Circle |
|  | 10.3 | Describe and Analyze Cross Sections of Circular Solids |
|  | 10.4 | Areas of Composite Figures |
|  | Lessons |  |
| Module 11-Analyze Surface Area and Volume | 11.1 | Describe and Analyze Cross Sections of Prisms and Pyramids |
|  | 11.2 | Derive and Apply Formulas for Surface Areas of Cubes and Right Prisms |
|  | 11.3 | Derive and Apply a Formula for the Volume of a Right Prism |
|  | 11.4 | Solve Multi-Step Problems with Surface Area and Volume |
| Unit 5: Sampling and Data Analysis |  |  |
|  | Lessons |  |
| Module 12-Proportional Reasoning with Samples | 12.1 | Understand Representative Samples |
|  | 12.2 | Make Inferences from a Random Sample |
|  | 12.3 | Make Inferences from Repeated Random Samples |

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|  | Lessons |  |
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| Module 13-Use Statistics and Graphs to Compare Data | 13.1 | Compare Center and Spread of Data Displayed in Dot Plots |
|  | 13.2 | Compare Center and Spread of Data Displayed in Box Plots |
|  | 13.3 | Compare Means Using Mean Absolute Deviation and Repeated Sampling |
| Unit 6: Probability |  |  |
|  | Lessons |  |
| Module 14-Understand and Apply Experimental Probability | 14.1 | Understand Probability of an Event |
|  | 14.2 | Find Experimental Probability of Simple Events |
|  | 14.3 | Find Experimental Probability of Compound Events |
|  | 14.4 | Use Experimental Probability and Proportional Reasoning to Make Predictions |
|  | Lessons |  |
| Module 15-Understand and Apply Theoretical Probability | 15.1 | Find Theoretical Probability of Simple Events |
|  | 15.2 | Find Theoretical Probability of Compound Events |
|  | 15.3 | Use Theoretical Probability and Proportional Reasoning to Make Predictions |
|  | 15.4 | Conduct Simulations |

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| Unit 1: Transformational Geometry |  |  |
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|  | Lessons |  |
| Module 1-Transformations and Congruence | 1.1 | Investigate Transformations |
|  | 1.2 | Explore Translations |
|  | 1.3 | Explore Reflections |
|  | 1.4 | Explore Rotations |
|  | 1.5 | Understand and Recognize Congruent Figures |
|  | Lessons |  |
| Module 2-Transformations and Similarity | 2.1 | Investigate Reductions and Enlargements |
|  | 2.2 | Explore Dilations |
|  | 2.3 | Understand and Recognize Similar Figures |
| Unit 2: Linear Equations and Applications |  |  |
|  | Lessons |  |
| Module 3-Solve Linear Equations | 3.1 | Solve Multi-Step Linear Equations |
|  | 3.2 | Examine Special Cases |
|  | 3.3 | Apply Linear Equations |
|  | Lessons |  |
| Module 4-Angle Relationships | 4.1 | Develop Angle Relationships for Triangles |
|  | 4.2 | Investigate Angle-Angle Similarity |
|  | 4.3 | Explore Parallel Lines Cut by a Transversal |
| Unit 3: Relationships and Functions |  |  |
|  | Lessons |  |
| Module 5-Proportional Relationships | 5.1 | Explain Slope with Similar Triangles |
|  | 5.2 | Derive $\mathrm{y}=\mathrm{mx}$ |
|  | 5.3 | Interpret and Graph Proportional Relationships |
|  | 5.4 | Compare Proportional Relationships |
|  | Lessons |  |
| Module 6-Understand and Analyze Functions | 6.1 | Understand and Graph Functions |
|  | 6.2 | Derive and Interpret $\mathrm{y}=\mathrm{mx}+\mathrm{b}$ |
|  | 6.3 | Interpret Rate of Change and Initial Value |
|  | 6.4 | Construct Functions |
|  | 6.5 | Compare Functions |
|  | 6.6 | Describe and Sketch Nonlinear Functions |

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|  | Lessons |  |
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| Module 7-Systems of Linear Equations | 7.1 | Represent Systems by Graphing |
|  | 7.2 | Solve Systems by Graphing |
|  | 7.3 | Solve Systems by Substitution |
|  | 7.4 | Solve Systems by Elimination |
|  | 7.5 | Examine Special Systems |
|  | 7.6 | Apply Systems of Equations |
| Unit 4: Statistics and Probability |  |  |
|  | Lessons |  |
| Module 8-Scatter Plots | 8.1 | Construct Scatter Plots and Examine Association |
|  | 8.2 | Draw and Analyze Trend Lines |
|  | 8.3 | Interpret Linear Data in Context |
|  | Lessons |  |
| Module 9-Two-Way Tables | 9.1 | Construct and Interpret Two-Way Frequency Tables |
|  | 9.2 | Construct Two-Way Relative Frequency Tables |
|  | 9.3 | Interpret Two-Way Relative Frequency Tables |
| Unit 5: Real Numbers and the Pythagorean Theorem |  |  |
|  | Lessons |  |
| Module 10-Real Numbers | 10.1 | Understand Rational and Irrational Numbers |
|  | 10.2 | Investigate Roots |
|  | 10.3 | Order Real Numbers |
|  | Lessons |  |
| Module 11-The Pythagorean Theorem | 11.1 | Prove the Pythagorean Theorem |
|  | 11.2 | Prove the Converse of the Pythagorean Theorem |
|  | 11.3 | Apply the Pythagorean Theorem |
|  | 11.4 | Apply the Pythagorean Theorem in the Coordinate Plane |
| Unit 6: Exponents, Scientific Notation, and Volume |  |  |
|  | Lessons |  |
| Module 12-Exponents and Scientific Notation | 12.1 | Know and Apply Properties of Exponents |
|  | 12.2 | Understand Scientific Notation |
|  | 12.3 | Compute with Scientific Notation |
|  | Lessons |  |
| Module 13-Volume | 13.1 | Find Volume of Cylinders |
|  | 13.2 | Find Volume of Cones |
|  | 13.3 | Find Volume of Spheres |
|  | 13.4 | Apply Volume |

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