

Grade Five
Gourmet Curriculum Press, Inc.©
Correlations with West Virginia
Instructional Math Goals and Objectives

Building on mastery of the basic facts of addition, subtraction, multiplication, and division, the fifth grade objectives place emphasis on developing proficiency in using whole numbers, fractions, and decimals to solve problems. Students will collect, display, and analyze data in a variety of ways and solve probability problems. Students will solve problems involving area and perimeter, will classify polygons, plot points on a coordinate plane, and write a number sentence using a variable to solve problems. Students should be actively engaged, continuing to use concrete materials and appropriate technologies such as calculators and computers. Problem solving should be integrated throughout all the strands. The development of a variety of problem-solving strategies should be a major goal of mathematics at this grade level.

Number Theory and Number Sense

5.14, 6, 7, 8 read, write, and identify place value of whole numbers and decimals from millions through thousandths using standard and expanded form **Appetizers 1 A, B, and C; Main Dish Objective 1 (Number Concepts) lessons 1, 2, and 3; Applications; Final Tests; Reasonableness Problems**

5.24, 6 compare and order the value of whole number and decimals from millions through thousandths using symbols $<$, $>$, or $=$ **Appetizers 1 B, C, and D; 11 A; Main Dish Objective 1 (Number Concepts) lessons 2, 3, and 4; Objective 11 (Solution Strategies) lesson 1; Applications; Final Tests; Reasonableness Problems**

5.36, 7, 8 identify alternative representations (pictures, models, number lines, etc.) of fractions, mixed numbers, and decimals **Appetizers 2 C; Main Dish Objective 2 (Mathematical Relations) lesson 3; Applications; Final Tests; Reasonableness Problems**

5.46, 7, 8 compare and order fractions, including lowest term fractions, improper fractions, and mixed numbers with like and unlike denominators **Appetizers 1 B, C, and D; 6 C, E, and G; 11 A; Main Dish Objective 1 (Number Concepts) lessons 2, 3, and 4; Objective 6 (Addition) lessons 3, 5, and 7; Objective 11 (Solution Strategies) lesson 1; Applications; Final Tests; Reasonableness Problems**

5.56, 7, 8 write or model equivalences of fractions, decimals, percent, and ratios **Appetizers 1 C and D; 6 E and G; Main Dish Objective 1 (Number Concepts) lessons 3 and 4; Objective 6 (Addition) lessons 5 and 7; Applications; Final Tests; Reasonableness Problems**

5.66 find the Greatest Common Factors of two numbers by listing factors **Appetizers 1 F; 6 E and G; Main Dish Objective 1 (Number Concepts) lesson 6; Objective 6 (Addition) lessons 5 and 7; Applications; Final Tests; Reasonableness Problems**

5.76 find the Least Common Multiple of two numbers by listing multiples **Appetizers 1 G; Main Dish Objective 1 (Number Concepts) lesson 6; Applications; Final Tests; Reasonableness Problems**

5.86 represent or model decimals on a grid or use concrete materials **Appetizers 1 B; 2 C; Main Dish Objective 1 (Number Concepts) lesson 2; Objective 2 (Mathematical Relations) lesson 3; Applications; Final Tests; Reasonableness Problems**

5.9 identify a number that is one hundred more or one hundred less than a given number **Appetizers 1 A; Main Dish Objective 1 (Number Concepts) lesson 1; Applications; Final Tests; Reasonableness Problems**

Computation and Estimation

5.10_{3, 4, 6, 7, 8} use estimation to solve problems with whole numbers and decimals including money (compatible numbers, rounding, and front-end estimation); use to determine reasonableness **Appetizers 1 E; 10 A, B, C, and F; Main Dish Objective 1 (Number Concepts) lesson 5; Objective 10 (Estimation) lessons 1, 2, 3, and 6; Applications; Final Tests; Reasonableness Problems**

5.11_{6, 7, 8} solve problems in context involving addition and subtraction of whole numbers through six digits; multiplication of whole numbers through four digits by three digits; division of whole numbers with dividends of up to five digits and divisors of up to two digits using estimations, mental math, calculators, and paper and pencil **Appetizers 6 A, B, and C; 7 A and B; 8 A, B, C, and D; 10 F; 11 A; Main Dish Objective 6 (Addition) lessons 1, 2, and 3; Objective 7 (Subtraction) lessons 1 and 2; Objective 8 (Multiplication) lessons 1, 2, 3, and 4; Objective 10 (Estimation) lesson 6; Objective 11 (Solution Strategies) lesson 1; Applications; Final Tests; Reasonableness Problems**

5.12_{6, 7, 8} solve problems in context involving addition, subtraction, and multiplication of decimals through the thousandths and division of decimal dividends through the thousandths by a single digit whole number divisor using estimation, mental math, calculators, and paper and pencil **Appetizers 6 B, C, and D; 7 B; 8 D; Main Dish Objective 6 (Addition) lessons 2, 3, and 4; Objective 7 (Subtraction) lesson 2; Objective 8 (Multiplication) lesson 4; Applications; Final Tests; Reasonableness Problems**

5.13_{6, 7, 8} solve problems in context involving addition and subtraction of fractions and mixed numbers with like and unlike denominators involving regrouping, expressing answers in simplest form **Appetizers 6 F and G; 7 C; 11 A; Main Dish Objective 6 (Addition) lessons 6 and 7; Objective 7 (Subtraction) lesson 3; Objective 11 (Solution Strategies) lesson 1; Applications; Final Tests; Reasonableness Problems**

5.14 use computation, estimation, calculators, and computers to solve application problems

5.15_{6, 7, 8} round to the nearest dollar, hour, and to the million and millionth places **Appetizers 1 E; 8 C; 10 B and F; 11 A; Main Dish Objective 1 (Number Concepts) lesson 5; Objective 8 (Multiplication) lesson 3; Objective 10 (Estimation) lessons 2 and 6; Objective 11 (Solution Strategies) lesson 1; Applications; Final Tests; Reasonableness Problems**

5.16_{6, 7, 8} solve problems with multiple operations in context and with operations involving basic percents in context **Appetizers 11 A and D; 12 A; Main Dish Objective 11 (Solution Strategies) lessons 1 and 4; Objective 12 (Mathematical Representation) lesson 1; Applications; Final Tests; Reasonableness Problems**

Patterns, Functions, and Algebra

5.17_{K, 1, 2, 3, 4, 6} explore a variety of patterns with missing elements, including numeric and geometric patterns, such as triangular numbers, perfect squares, patterns formed by powers of ten, and arithmetic sequences using paper and pencil, concrete materials, calculators, and/or computers **Appetizers 2 B and C; Main Dish Objective 2 (Mathematical Relations) lessons 2 and 3; Applications; Final Tests; Reasonableness Problems**

5.18_{6, 7, 8} use input/output models for functions (number machines) **Appetizers 2 B and C; Main Dish Objective 2 (Mathematical Relations) lesson 1; Applications; Final Tests; Reasonableness Problems** 2

5.19 write a number sentence using a variable to solve problems **Appetizers 12 A; Main Dish Objective 12 (Mathematical Representation) lesson 1; Applications; Final Tests; Reasonableness Problems** Fi

5.20 solve problems by using choice of strategies including guess and check, make a table, make a model, make a list, draw a picture, find a pattern, work backwards, use a formula, and/or make a diagram **Appetizers 11 A and D; 12 A; Main Dish Objective 11 (Solution Strategies) lessons 1 and 4; Objective 12 (Mathematical Representation) lesson 1; Applications; Final Tests; Reasonableness Problems**

5.21_{3, 4, 6, 7} rewrite addition and multiplication number sentences and expressions using the operations of addition and multiplication and their inverse and commutative properties [e.g., $4 \times 3 \div 3 = 4$ (fact families) and $5 \times 8 \times 3 = 3 \times 8 \times 5$] **Appetizers 1 C; 2 A and B; 11 A; 12 A; Main Dish Objective 1 (Number Concepts) lesson 3; Objective 2 (Mathematical Relations) lessons 1 and 2; Objective 11 (Solution Strategies) lesson 1; Objective 12 (Mathematical Representation) lesson 1; Applications; Final Tests; Reasonableness Problems**

5.22 introduce the order of operations: parenthesis, multiplication and division, then addition and subtraction

Probability and Statistics

5.23^{6, 7, 8} collect, organize, display, read, and interpret numerical data in a variety of forms: tables, tally charts, bar graphs, line graphs, circle graphs, and stem-and-leaf plots **Appetizers 5 A, B, and C; 11 D; 12 B; Main Dish Objective 5 (Probability/Statistics) lessons 1, 2, and 3; Objective 11 (Solution Strategies) lesson 4; Objective 12 (Mathematical Representation) lesson 2; Applications; Final Tests; Reasonableness Problems**

5.24^{6, 7} find the mean, median, range, and mode of a given set of data **Appetizers 5 E; Main Dish Objective 5 (Probability/Statistics) lesson 5; Applications; Final Tests; Reasonableness Problems**

5.25^{4, 6, 7, 8} identify probabilities and solve problems involving the probability of an event by using tree diagrams or by construction of a sample space representing all possible results **Appetizers 5 C; Main Dish Objective 5 (Probability/Statistics) lesson 3; Applications; Final Tests; Reasonableness Problems**

5.26 construct, read, or interpret tables, charts, and graphs to draw reasonable inferences or verify predictions using available technology **Appetizers 5 B and D; 12 A; 13 A; Main Dish Objective 5 (Probability/Statistics) lessons 2 and 4; Objective 12 (Mathematical Representation) lesson 1; Objective 13 (Reasonableness) lesson 1; Applications; Final Tests; Reasonableness Problems**

5.27 model situations by carrying out experiments to determine probability **Appetizers 5 A; Main Dish Objective 5 (Probability/Statistics) lesson 1; Applications; Final Tests; Reasonableness Problems**

5.28^{6, 7, 8} determine combinations and permutations (tree diagrams and probability experiments with and without replacements)

Geometry

5.29^{4, 6, 7} compare, classify, measure, and draw right, acute, and obtuse angles and triangles using a straightedge and protractor

5.30 recognize and construct isosceles, right, and equilateral triangles

5.31 classify and compare the following polygons: square, rectangle, parallelogram, pentagon, hexagon, and octagon **Appetizers 3 A and B; 11 B; Main Dish Objective 3 (Geometry) lessons 1 and 2; Objective 11 (Solution Strategies) lesson 2; Applications; Final Tests; Reasonableness Problems**

5.32^{3, 4, 6, 7} identify the ordered pair for a point and locate the point in the first quadrant of a coordinate plane **Appetizers 2 D; Main Dish Objective 2 (Mathematical Relations) lesson 4; Applications; Final Tests; Reasonableness Problems**

Reasonableness Problems

5.33 identify figures as similar and/or congruent, including scale drawings **Appetizers 3 D; 11 C; Main Dish Objective 3 (Geometry) lesson 4; Objective 11 (Solution Strategies) lesson 3; Applications; Final Tests; Reasonableness Problems**

5.34 recognize lines of symmetry in the environment **Appetizers 3 D; 11 C; Main Dish Objective 3 (Geometry) lesson 4; Objective 11 (Solution Strategies) lesson 3; Applications; Final Tests; Reasonableness Problems**

5.35 recognize the images of figures after flips, slides, and turns (reflections, translations, and rotation) **Appetizers 3 C; Main Dish Objective 3 (Geometry) lesson 3; Applications; Final Tests; Reasonableness Problems**

Measurement

5.36, 7, 8 estimate and/or measure the length of real objects in parts of an inch up to $\frac{1}{8}$ inch, whole inches, feet, yards, miles, millimeters, centimeters, meters, and kilometers **Appetizers 4 A, B, and C; Main Dish Objective 4 (Measurement) lessons 1, 2, and 3; Applications; Final Tests; Reasonableness Problems**

5.37 estimate and/or measure the weight/mass of real objects in ounces, pounds, tons, grams, and kilograms **Appetizers 4 A and E; Main Dish Objective 4 (Measurement) lessons 1 and 5; Applications; Final Tests; Reasonableness Problems**

5.38 estimate and/or measure liquid volume in cups, pints, quarts, gallons, milliliters, and liters **Appetizers 4 A, B, C, D, and E; Main Dish Objective 4 (Measurement) lessons 1, 2, 3, 4, and 5; Applications; Final Tests; Reasonableness Problems**

5.39 estimate and measure temperature in Celsius and Fahrenheit units of the boiling point of water, freezing point of water, room temperature, and body temperature **Appetizers 4 A; Main Dish Objective 4 (Measurement) lesson 1; Applications; Final Tests; Reasonableness Problems**

5.40, 6, 7, 8 describe, determine, and compare the perimeters of polygons and the area in square units of squares, rectangles, and triangles, given the appropriate measures **Appetizers 4 D and F; 11 B; Main Dish Objective 4 (Measurement) lessons 4 and 6; Objective 11 (Solution Strategies) lesson 2; Applications; Final Tests; Reasonableness Problems**

5.41 apply the concepts of perimeter, area, volume, weight/mass, time, and temperature in practical problem-solving situations **Appetizers 4 D and E; 11 B; Main Dish Objective 4 (Measurement) lessons 4 and 5; Objective 11 (Solution Strategies) lesson 2; Applications; Final Tests; Reasonableness Problems**

5.422, 3, 4, 6, 7, 8 determine an amount of elapsed time in hours and minutes within a twenty-four hour period **Appetizers 4 A; Main Dish Objective 4 (Measurement) lesson 1; Applications; Final Tests; Reasonableness Problems**

5.43 apply the concepts of perimeter, area, volume, weight/mass, time, and temperature in practical problem-solving situations **Appetizers 4; Main Dish Objective 4 (Measurement); Applications; Final Tests; Reasonableness Problems**

5.446, 7, 8 compute and convert customary and metric units of measure within the same system in problem-solving situations **Appetizers 4 B and C; Main Dish Objective 4 (Measurement) lessons 2 and 3; Applications; Final Tests; Reasonableness Problems**

5.456 select appropriate customary and metric units and tools for measuring to desired degree of precision **Appetizers 4 B and C; Main Dish Objective 4 (Measurement) lessons 2 and 3; Applications; Final Tests; Reasonableness Problems**

5.466, 7, 8 determine actual measurements from scale drawings

Computer and Technology

5.47 use appropriate software to practice and master fifth grade instructional objectives in mathematics **Appetizers; Main Dish; Applications; Final Tests; Reasonableness Problems; Doggie Bag CD Rom**

5.48 use a calculator to solve problems with large whole numbers and small decimal numbers **Appetizers; Main Dish; Applications; Final Tests; Reasonableness Problems; Doggie Bag CD Rom**

5.49 use a calculator to solve problems with large whole numbers and small decimal numbers **Appetizers; Main Dish; Applications; Final Tests; Reasonableness Problems; Doggie Bag CD Rom**

5.50 use a calculator to solve application problems **Appetizers; Main Dish; Applications; Final Tests; Reasonableness Problems; Doggie Bags**

5.51 use a calculator to produce a variety of number patterns **Appetizers; Main Dish; Applications; Final Tests; Reasonableness Problems; Doggie Bag CD Rom**

5.52 use a calculator to find mean, median, range, and mode of a given set of data

5.53 use a calculator to convert customary and metric units of measure in problem-solving situations

5.54 use graphing software to organize and display data by creating tables, charts, bar, line, and circle graphs

5.55 practice inputting data using correct keying, editing, and formatting techniques

5.56 identify examples of mathematical work that is protected by copyright laws

5.57 describe the influence of technology on mathematics **Appetizers; Main Dish; Applications; Final Tests; Reasonableness Problems; Journal Writing Topics**