

4TH GRADE MATH STANDARDS

| List of Performance expectation | Core Content #1: <u>Multi-Digit Multiplication</u> | Core Content #2: <u>Fractions, Decimals, and Mixed Numbers</u> | Core Content #3: <u>Concept of Area</u> | Core Content #4: <u>Additional Key Content</u> | Core Processes: <u>Reasoning, Problem Solving, and Communication</u> |
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| A | Quickly recall multiplication facts through 10 X 10 and the related division facts. ○ | Represent decimals through hundredths with place value models, fraction equivalents, and the number line. N | Determine congruence of two-dimensional figures. GM | Represent an unknown quantity in simple expressions, equations, and inequalities using letters, boxes, and other symbols. A | Determine the question(s) to be answered given a problem situation. |
| B | Identify factors and multiples of a number. N | Read, write, compare, and order decimals through hundredths. N | Determine the approximate area of a figure using square units. GM | Solve single- and multi-step problems involving familiar unit conversions, including time, within either the U.S. customary or metric system. GMA | Identify information that is given in a problem and decide whether it is necessary or unnecessary to the solution of the problem. |
| C | Represent multiplication of a two-digit number by a two-digit number with place value models. ○ | Convert a mixed number to a fraction and vice versa and visually represent the number. N | Determine the perimeter and area of a rectangle using formulas, and explain why the formulas work. GM | Estimate and determine elapsed time using a calendar, a digital clock, and an analog clock. GM | Identify missing information that is needed to solve a problem. |
| D | Multiply by 10, 100, and 1,000. ○ | Convert a decimal to a fraction and vice versa and visually represent the number. N | Determine the areas of figures that can be broken down into rectangles. GM | Graph and identify points in the first quadrant of the coordinate plane using ordered pairs. A | Determine whether a problem to be solved is similar to previously solved problems, and identify possible strategies for solving the problem. |
| E | Compare the values represented by digits in whole numbers using place value. N | Compare and order decimals and fractions (including mixed numbers) on the number line, lists, and the symbols <, >, or =. N | Demonstrate that rectangles with the same area can have different perimeters, and that rectangles with the same perimeter can have different areas. GM | Determine the median, mode, and range of a set of data and describe what each measure indicates about the data. PS | Select and use one or more appropriate strategies to solve a problem and explain why that strategy was chosen. |
| F | Fluently and accurately multiply up to a three-digit number by one- and two-digit numbers using the standard multiplication algorithm. ○ | Write a fraction equivalent to a given fraction. N | Solve single- and multi-step word problems involving perimeters and areas of rectangles and verify the solutions. GMA | Describe and compare the likelihood of events. PS | Represent a problem situation using words, numbers, pictures, physical objects, or symbols. |
| G | Mentally multiply two-digit numbers by numbers through 10 and by multiples of 10. ○ | Simplify fractions using common factors. N | | Determine a simple probability from a context that includes a picture. PS | Explain why a specific problem-solving strategy or procedure was used to determine a solution. |
| H | Estimate products to approximate solutions to problems and determine reasonableness of answers. ○ | Round fractions and decimals to the nearest whole number. N | | Display the results of probability experiments and interpret the results. PS | Analyze and evaluate whether a solution is reasonable, is mathematically correct, and answers the question. |
| I | Solve single- and multi-step word problems involving multi-digit multiplication and verify the solutions. AO | Solve single- and multi-step word problems involving comparison of decimals and fractions (including mixed numbers), and verify the solutions. | | | Summarize mathematical information, draw conclusions, and explain reasoning. |

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| J | Solve single- and multi-step word problems involving division and verify the solutions. AO | | | | Make and test conjectures based on data (or information) collected from explorations and experiments. |