Florida Mathematics (B.E.S.T.)

Grade 5: Access Points

Algebraic Reasoning

1 Solve problems involving the four operations with whole numbers and fractions.

- 1 Solve one- and two-step real-world problems involving any combination of the four operations with whole numbers. Explore problems in which remainders must be interpreted within the context. MA.5.AR.1.AP.1
- a Solve one-step real-world problems involving addition and subtraction of mixed numbers and fractions greater than one with like denominators. MA.5.AR.1.AP.2A
- b Solve one-step real-world problems involving multiplication of unit fractions. MA.5.AR.1.AP.2B
- 3 Solve one-step real-world problems involving division of a whole number by a unit fraction. MA.5.AR.1.AP.3

2 Demonstrate an understanding of equality, the order of operations and equivalent numerical expressions.

- 1 Translate mathematical descriptions (e.g., five plus two; the product of three and four) into numerical expressions with two terms. MA.5.AR.2.AP.1
- 2 Evaluate an expression containing three terms and one set of parentheses. MA.5.AR.2.AP.2
- 3 Determine whether an equation (with no more than four terms and up to one set of parentheses) involving any of the four operations with whole numbers is true or false. Limit addition and subtraction to within 100 and limit multiplication and division to the products of two single-digit whole numbers and their related division facts. MA.5.AR.2.AP.3
- 4 Given a mathematical or real-world context, generate an equation involving any of the four operations to determine the unknown sum, difference, product or quotient. Sums may not exceed 100 and their related subtraction facts. Multiplication and division may not exceed two digit by one digit. MA.5.AR.2.AP.4

3 Analyze patterns and relationships between inputs and outputs.

- 1 Given a numerical pattern, identify a one-step rule that can describe the pattern. MA.5.AR.3.AP.1
- 2 Given the inputs and a one-step addition or subtraction rule for a numerical pattern, use a two-column table to record the outputs. MA.5.AR.3.AP.2

Data Analysis and Probability

1 Collect, represent and interpret data and find the mean, mode, median or range of a data set.

1 Sort and represent numerical data, including fractional values using tables or line plots (when given a scaled number line). Data set to include only whole numbers, halves and quarters. MA.5.DP.1.AP.1

2 Interpret numerical data, with whole-number values, represented with tables or line plots by determining the mean, mode or range. Line plot scales to include only whole numbers, halves and quarters. MA.5.DP.1.AP.2

Fractions

1 Interpret a fraction as an answer to a division problem.

1 Explore the connection between fractions and division in a real-world problem. MA.5.FR.1.AP.1

2 Perform operations with fractions.

a Explore adding and subtracting mixed numbers and fractions greater than 1 with like denominators. MA.5.FR.2.AP.1A

b Explore adding and subtracting fractions less than one with unlike denominators where one denominator is a multiple of the other (e.g., 1/2 + 3/4, 2/3 − 1/6). MA.5.FR.2.AP.1B

2 Explore multiplying a unit fraction by a unit fraction. MA.5.FR.2.AP.2

3 Explore the impact on the size of the product when multiplying a given number by a fraction less than 1 or by a whole number. MA.5.FR.2.AP.3

4 Explore the division of a one-digit whole number by a unit fraction. Denominators are limited to 2, 3 or 4. MA.5.FR.2.AP.4

Geometric Reasoning

1 Classify two-dimensional figures and three-dimensional figures based on defining attributes.

a Sort triangles into different categories based on the size of their angles. Triangles include acute, obtuse and right. MA.5.GR.1.AP.1A

b Sort quadrilaterals into different categories based on shared defining attributes. Explore why a quadrilateral would or would not belong to a category. Quadrilaterals include parallelograms, rhombi, rectangles, squares and trapezoids. MA.5.GR.1.AP.1B

2 Identify and sort three-dimensional figures into categories based on their defining attributes. Figures are limited to right rectangular pyramids, right rectangular prisms, right circular cylinders, right circular cones and spheres. MA.5.GR.1.AP.2

2 Find the perimeter and area of rectangles with fractional or decimal side lengths.

1 Find the perimeter and area of a rectangle with decimal side lengths using a visual model and calculator. MA.5.GR.2.AP.1

3 Solve problems involving the volume of right rectangular prisms.

1. Explore volume as an attribute of three-dimensional figures that can be measured by packing them with unit cubes without gaps. MA.5.GR.3.AP.1
2. Find the volume of a right rectangular prism with whole-number side lengths by counting unit cubes. Explore that the volume is the same as what would be found by multiplying the edge lengths. MA.5.GR.3.AP.2
3. Solve real-world problems involving the volume of right rectangular prisms with given whole-number edge lengths using a visual model or formula. MA.5.GR.3.AP.3

4 Plot points and represent problems on the coordinate plane.

1. Explore the first quadrant of the coordinate plane including the origin, axes and points located by using ordered pairs. MA.5.GR.4.AP.1
2. Plot and label ordered pairs in the first quadrant of the coordinate plane. MA.5.GR.4.AP.2

Measurement

1 Convert measurement units to solve multi-step problems.

a. Using a conversion sheet, convert within a single system of measurement using the units: miles, yards, feet, inches; pounds, ounces; gallons, quarts, pints, cups; and hours, minutes. Only whole number measurements may be used. MA.5.M.1.AP.1A

b. Using a conversion sheet, solve one-and two-step real-world problems that involve converting measurement units (i.e., miles, yards, feet, inches; pounds, ounces; gallons, quarts, pints, cups; and hours, minutes) to equivalent measurements within a single system of measurement. Only whole number measurements may be used. MA.5.M.1.AP.1B

2 Solve problems involving money.

1. Solve one- and two-step addition and subtraction real-world problems involving money using decimal notation with all terms less than $20.00 (e.g., $11.74 + $5.31, $10.99 − $3.26). MA.5.M.2.AP.1

Number Sense and Operations

1 Understand the place value of multi-digit numbers with decimals to the thousandths place.

1. Explore how the value of a digit in a multi-digit number with decimals to the hundredths changes if the digit moves one place to the left. Multi-digit numbers not to exceed 9.99. MA.5.NSO.1.AP.1
2. Read and generate multi-digit numbers with decimals to the hundredths using standard form and expanded form. Multi-digit numbers not to exceed 9.99. MA.5.NSO.1.AP.2
3. Compose and decompose multi-digit numbers with decimals to the hundredths. Demonstrate each composition or decomposition with objects, drawings, expressions or equations. Multi-digit numbers not to exceed 9.99. MA.5.NSO.1.AP.3
4. Plot, order and compare multi-digit numbers with decimals up to the hundredths. Multi-digit numbers not to exceed 9.99. MA.5.NSO.1.AP.4
5. Round multi-digit numbers with decimals to the tenths to the nearest whole number (e.g., 1.7 rounds to 2); and numbers with decimals to the hundredths to the nearest tenth (e.g., 2.36 rounds to 2.4). Multi-digit numbers not to exceed 9.99. MA.5.NSO.1.AP.5

2 Add, subtract, multiply and divide multi-digit numbers.

1. Explore multiplication of two whole numbers, up to two digits by two digits. MA.5.NSO.2.AP.1
2. Apply a strategy to divide two whole numbers up to two digits by one digit, including the possibility of whole number remainders. MA.5.NSO.2.AP.2
3. Apply a strategy to add and subtract multi-digit numbers with decimals to the tenths (e.g., 3.3 + 0.5) and hundredths (e.g., 1.25 − 0.12). Multi-digit numbers not to exceed 9.99. MA.5.NSO.2.AP.3
4. Explore the estimation of products and quotients of two multi-digit numbers with decimals to the tenths (e.g., 8.9 × 2.3 becomes 9 × 2 by rounding both factors to the nearest whole number). Multi-digit numbers not to exceed 9.9. MA.5.NSO.2.AP.4
5. Explore multiplying and dividing single-digit whole numbers by one-tenth and one-hundredth. MA.5.NSO.2.AP.5