

# Third Grade Mathematics Georgia Performance Standards

#### **Numbers and Operations**

M3N1 Students will further develop their understanding of whole numbers and ways of representing them.

a. Identify place values from tenths through ten thousands.

Episode 205

b. Understand the relative sizes of digits in place value notation (10 times, 100 times, 1/10 of a single digit whole number) and ways to represent them.

### M3N2 Students will further develop their skills of addition and subtraction and apply them in problem solving.

- a. Use the properties of addition and subtraction to compute and verify the results of computation.
- b. Use mental math and estimation strategies to add and subtract. Episode 209
- c. Solve problems requiring addition and subtraction.

Episode 209

Episode 212

### M3N3 Students will further develop their understanding of multiplication of whole numbers and develop the ability to apply it in problem solving.

a. Describe the relationship between addition and multiplication, i.e., multiplication is defined as repeated addition.

Episode 201

Episode 204

Episode 210

Episode 218

b. Know the multiplication facts with understanding and fluency to 10 x 10.

Episode 212

Episode 213

Episode 214

c. Use arrays and area models to develop understanding of the distributive property and to determine partial products for multiplication of 2- or 3-digit numbers by a 1-digit number.

Episode 214

d. Understand the effect on the product when multiplying by multiples of 10.

Episode 211

Episode 212

Episode 213

Episode 218

- e. Apply the identity, commutative, and associative properties of multiplication and verify the results.
- f. Use mental math and estimation strategies to multiply.

Episode 203

g. Solve problems requiring multiplication.

Episode 212

Episode 213

Episode 219

### M3N4 Students will understand the meaning of division and develop the ability to apply it in problem solving.

a. Understand the relationship between division and multiplication and between division and subtraction.

Episode 217

- b. Recognize that division may be two situations: the first is determining how many equal parts of a given size or amount may be taken away from the whole as in repeated subtraction, and the second is determining the size of the parts when the whole is separated into a given number of equal parts as in a sharing model.
- c. Recognize problem-solving situations in which division may be applied and write corresponding mathematical expressions.
- d. Explain the meaning of a remainder in division in different circumstances.
- e. Divide a 2 and 3-digit number by a 1-digit divisor.

Episode 213

f. Solve problems requiring division.

Episode 203

Episode 212

Episode 219

## M3N5 Students will understand the meaning of decimals and common fractions in simple cases and apply them in problem-solving situations.

a. Understand a decimal (i.e., 0.1) and a common fraction (i.e., 1/10) represent parts of a whole.

Episode 204 Episode 205

Episode 213

- b. Understand the fraction a/b represents a equal sized parts of a whole that is divided into b equal sized parts.
- c. Understand a one place decimal represents tenths, i.e., 0.3 = 3/10.
- d. Know and use decimals and common fractions to represent the size of parts created by equal divisions of a whole.

Episode 212

e. Understand the concept of addition and subtraction of decimals and common fractions with like denominators.

Episode 218

- f. Model addition and subtraction of decimals and common fractions.
- g. Solve problems involving fractions.

Episode 219

#### Measurement

M3M1 Students will further develop their understanding of the concept of time by determining elapsed time of a full, half, and quarter-hour.

Episode 206 Episode 216

### M3M2Students will measure length choosing appropriate units and tools.

a. Use the units kilometer (km) and mile (mi.) to discuss the measure of long distances.

Episode 209

b. Measure to the nearest 1/4 inch, 1/2 inch, and millimeter (mm) in addition to the previously learned inch, foot, yard, centimeter, and meter.

Episode 212 Episode 213

Episode 214

c. Estimate length and represent it using appropriate units.

Episode 209

d. Compare one unit to another within a single system of measurement.

Episode 209

Episode 213

Episode 214

Episode 216

Episode 218

Episode 219

### M3M3Students will understand and measure the perimeter of simple geometric figures (squares and rectangles).

Episode 213

- a. Understand the meaning of the linear unit in measuring perimeter.
- b. Understand the concept of perimeter as being the boundary of a simple geometric figure.
- c. Determine the perimeter of a simple geometric figure by measuring and summing the lengths of the sides.

### M3M4Students will understand and measure the area of simple geometric figures (squares and rectangles).

Episode 214 Episode 218

a. Understand the meaning of the square unit in measuring area.

Episode 213

- b. Model (by tiling) the area of a simple geometric figure using square units (square inch, square foot, etc.).
- c. Determine the area of squares and rectangles by counting, adding, and multiplying with models.

#### Geometry

M3G1 Students will further develop their understanding of geometric figures by drawing them. They will also state and explain their properties.

- a. Draw and classify previously learned fundamental geometric figures as well as scalene, isosceles, and equilateral triangles.
- b. Identify and explain the properties of fundamental geometric figures. Episode 214
- c. Examine and compare angles of fundamental geometric figures.

d. Identify the center, diameter, and radius of a circle. Episode 214