

# KINDERGARTEN MATH STANDARDS

## ALGEBRA STANDARDS

**Goal 1:** Students will use the language of algebra to explore, describe, represent, and analyze number expressions and relations that represent variable quantities.

**Indicator 1:** Use procedures to transform algebraic expressions.

*Note: Kindergarten through grade 2 students do not master standards for Indicator 1. Mastery of this indicator emerges and increases from grade 3 upward.*

**Indicator 2:** Use a variety of algebraic concepts and methods to solve equations and inequalities.

- K.A.2.1. (Comprehension) Compare collections of objects to determine more, less, and equal (greater than and less than).

**Indicator 3:** Interpret and develop mathematical models.

- K.A.3.1. (Knowledge) Use concrete objects to model the meaning of the “+” and “-” symbols.

**Indicator 4:** Analyze and describe the properties and behaviors of relations, functions, and their inverses.

- K.A.4.1. (Knowledge) Identify and extend two-part repeating patterns using concrete objects.

## GEOMETRY STANDARDS

**Goal 2:** Students will use the language of geometry to discover, analyze, and communicate geometric concepts, properties, and relationships.

**Indicator 1:** Use deductive and inductive reasoning to recognize and apply properties of geometric figures.

- K.G.1.1. (Knowledge) Identify basic two-dimensional (plane) figures.

**Indicator 2:** Use properties of geometric figures to solve problems from a variety of perspectives.

- K.G.2.1. (Comprehension) Describe the position of two-dimensional (plane) figures.

## MEASUREMENT STANDARDS

**Goal 3:** Students will apply systems of measurement and use appropriate measurement tools to describe and analyze the world around them.

**Indicator 1:** Apply measurement concepts in practical applications.

- K.M.1.1. (Knowledge) Tell time to the hour using analog and digital clocks.
- K.M.1.2. (Knowledge) Name the days of the week.

- K.M.1.3. (Knowledge) Identify pennies, nickels, dimes, and quarters using money models.Z
- K.M.1.4. (Knowledge) Estimate length using non-standard units of measure.
- K.M.1.5. (Comprehension) Compare and order concrete objects by length, height, and weight.

## NUMBER SENSE STANDARDS

**Goal 4:** Students will develop and use number sense to investigate the characteristics of numbers in a variety of forms and modes of operation.

**Indicator 1:** Use the structural characteristics of the set of real numbers and its various subsets. Apply the concept of value, magnitude, and relative magnitude of real numbers.

- K.N.1.1. (Comprehension) Read, write, count, and sequence numerals to 20.
- K.N.1.2. (Knowledge) Use fraction models to create one half of a whole.

**Indicator 2:** Apply operations within the set of real numbers.

(Mastery of this indicator does not emerge until first grade.)

**Indicator 3:** Develop conjectures, predictions, or estimations to solve problems and verify or justify the results.

- K.N.3.1. (Application) Solve addition and subtraction problems up to 10 in context.

## STATISTICS AND PROBABILITY STANDARDS

**Goal 5:** Students will apply statistical methods to analyze data and explore probability for making decisions and predictions.

**Indicator 1:** Use statistical models to gather, analyze, and display data to draw conclusions.

- K.S.1.1. (Knowledge) Describe data represented in simple graphs (using real objects) and pictographs.

**Indicator 2:** Apply the law of probability to predict outcomes and solve problems.

(Mastery of this indicator does not emerge until first grade.)

# 1<sup>ST</sup> GRADE MATH STANDARDS

## ALGEBRA STANDARDS

**Goal 1:** Students will use the language of algebra to explore, describe, represent, and analyze number expressions and relations that represent variable quantities.

**Indicator 1:** Use procedures to transform algebraic expressions.

*Note: Kindergarten through grade 2 students do not master standards for Indicator 1. Mastery of this indicator emerges and increases from grade 3 upward.*

**Indicator 2:** Use a variety of algebraic concepts and methods to solve equations and inequalities.

- 1.A.2.1. (Comprehension) Use the concepts and language of more, less, and equal (greater than and less than) to compare numbers and sets (0 to 20).
- 1.A.2.2. (Application) Solve open addition and subtraction sentences with one unknown ( $\square$ ) using numbers equal to or less than 10.

**Indicator 3:** Interpret and develop mathematical models.

- 1.A.3.1. (Application) Students are able to write number sentences from problem situations using + or – and = with numbers to 10.

**Indicator 4:** Analyze and describe the properties and behaviors of relations, functions, and their inverses.

- 1.A.4.1. (Comprehension) Identify and extend repeating patterns containing multiple elements using objects and pictures.
- 1.A.4.2. (Comprehension) Determine common attributes in a given group and identify those objects that do not belong.

## GEOMETRY STANDARDS

**Goal 2:** Students will use the language of geometry to discover, analyze, and communicate geometric concepts, properties, and relationships.

**Indicator 1:** Use deductive and inductive reasoning to recognize and apply properties of geometric figures.

- 1.G.1.1. (Comprehension) Describe characteristics of plane figures.
- 1.G.1.2. (Comprehension) Sort basic three-dimensional figures.

**Indicator 2:** Use properties of geometric figures to solve problems from a variety of perspectives.

- 1.G.2.1. (Comprehension) Describe proximity of objects in space.

## MEASUREMENT STANDARDS

**Goal 3:** Students will apply systems of measurement and use appropriate measurement tools to describe and analyze the world around them.

**Indicator 1:** Apply measurement concepts in practical applications.

- 1.M.1.1. (Knowledge) Tell time to the half-hour using analog and digital clocks and order a sequence of events with respect to time..
- 1.M.1.2. (Application) Find a date on the calendar.
- 1.M.1.3. (Application) Use different combinations of pennies, nickels, and dimes to represent money amounts to 25 cents.
- 1.M.1.4. (Comprehension) Estimate weight using non-standard units of measure.
- 1.M.1.5. (Knowledge) Identify appropriate measuring tools for length, weight, capacity, and temperature.
- 1.M.1.6. (Comprehension) Compare and order concrete objects by temperature and capacity.

## NUMBER SENSE STANDARDS

**Goal 4:** Students will develop and use number sense to investigate the characteristics of numbers in a variety of forms and modes of operation.

**Indicator 1:** Use the structural characteristics of the set of real numbers and its various subsets. Apply the concept of value, magnitude, and relative magnitude of real numbers.

- 1.N.1.1. (Comprehension) Read, write, count, and order numerals to 50.
- 1.N.1.2. (Knowledge) Use unit fraction models to create parts of a whole.

**Indicator 2:** Apply operations within the set of real numbers.

- 1.N.2.1. (Application) Solve addition and subtraction problems with numbers 0 to 20 written in horizontal and vertical formats using a variety of strategies.

**Indicator 3:** Develop conjectures, predictions, or estimations to solve problems and verify or justify the results.

- 1.N.3.1. (Application) Solve addition and subtraction problems up to 20 in context.

## STATISTICS AND PROBABILITY STANDARDS

**Goal 5:** Students will apply statistical methods to analyze data and explore probability for making decisions and predictions.

**Indicator 1:** Use statistical models to gather, analyze, and display data to draw conclusions.

- 1.S.1.1. (Application) Display data in simple picture graphs with units of one and bar graphs with intervals of one.
- 1.S.1.2. (Comprehension) Answer questions from organized data.

**Indicator 2:** Apply the law of probability to predict outcomes and solve problems.

- 1.S.2.1. (Comprehension) Recognize whether the outcome of a simple event is possible or impossible.

## 2<sup>nd</sup> GRADE MATH STANDARDS

### ALGEBRA STANDARDS

**Goal 1:** Students will use the language of algebra to explore, describe, represent, and analyze number expressions and relations that represent variable quantities.

**Indicator 1:** Use procedures to transform algebraic expressions.

*Note: Kindergarten through grade 2 students do not master standards for Indicator 1. Mastery of this indicator emerges and increases from grade 3 upward.*

**Indicator 2:** Use a variety of algebraic concepts and methods to solve equations and inequalities.

- 2.A.2.1. (Comprehension) Use concepts of equal to, greater than, and less than to compare numbers (0-100).
- 2.A.2.2. (Application) Solve open addition and subtraction sentences with one unknown ( $\square$ ) using numbers equal to or less than 20.
- 2.A.2.3. (Application) Balance simple addition and subtraction equations using sums up to 20.

**Indicator 3:** Interpret and develop mathematical models.

- 2.A.3.1. (Application) Write and solve number sentences from word problems.

**Indicator 4:** Analyze and describe the properties and behaviors of relations, functions, and their inverses.

- 2.A.4.1. (Comprehension) Find and extend growing patterns using symbols, objects, and numbers.
- 2.A.4.2. (Comprehension) Determine likenesses and differences between sets.

### GEOMETRY STANDARDS

**Goal 2:** Students will use the language of geometry to discover, analyze, and communicate geometric concepts, properties, and relationships.

**Indicator 1:** Use deductive and inductive reasoning to recognize and apply properties of geometric figures.

- 2.G.1.1. (Comprehension) Use the terms side and vertex (corners) to identify plane and solid figures.

**Indicator 2:** Use properties of geometric figures to solve problems from a variety of perspectives.

- 2.G.2.1. (Knowledge) Identify geometric figures regardless of position and orientation in space.

### MEASUREMENT STANDARDS

**Goal 3:** Students will apply systems of measurement and use appropriate measurement tools to describe and analyze the world around them.

**Indicator 1:** Apply measurement concepts in practical applications.

- 2.M.1.1. (Knowledge) Tell time to the minute using analog and digital clocks and relate time to daily events.
- 2.M.1.2. (Application) Use the calendar to solve problems.

- 2.M.1.3. (Application) Determine the value of a collection of like and unlike coins with a value up to \$1.00.
- 2.M.1.4. (Knowledge) Represent and write the value of money using the “¢” sign and in decimal form using the “\$” sign.
- 2.M.1.5. (Comprehension) Use whole number approximations for capacity using non-standard units of measure.
- 2.M.1.6. (Comprehension) Solve everyday problems by measuring length to the nearest inch or foot.
- 2.M.1.7. (Application) Locate and name concrete objects that are about the same length, height, weight, capacity, and temperature as a given concrete object.

### NUMBER SENSE STANDARDS

**Goal 4:** Students will develop and use number sense to investigate the characteristics of numbers in a variety of forms and modes of operation.

**Indicator 1:** Use the structural characteristics of the set of real numbers and its various subsets. Apply the concept of value, magnitude, and relative magnitude of real numbers.

- 2.N.1.1. (Comprehension) Read, write, count, and sequence numerals to 100.
- 2.N.1.2. (Comprehension) Identify and represent fractions as parts of a group.

**Indicator 2:** Apply operations within the set of real numbers.

- 2.N.2.1. (Application) Solve two-digit addition and subtraction problems written in horizontal and vertical formats using a variety of strategies.

**Indicator 3:** Develop conjectures, predictions, or estimations to solve problems and verify or justify the results.

- 2.N.3.1. (Application) Solve addition and subtraction problems up to 100 in context.

### STATISTICS AND PROBABILITY STANDARDS

**Goal 5:** Students will apply statistical methods to analyze data and explore probability for making decisions and predictions.

**Indicator 1:** Use statistical models to gather, analyze, and display data to draw conclusions.

- 2.S.1.1. (Comprehension) Use interviews, surveys, and observations to gather data.
- 2.S.1.2. (Application) Represent data sets in more than one way.
- 2.S.1.3. (Comprehension) Answer questions about and generate explanations of data given in tables and graphs.

**Indicator 2:** Apply the law of probability to predict outcomes and solve problems.

- 2.S.2.1. (Application) List possible outcomes of a simple event and make predictions about which outcome is more or less likely to occur.

## 3<sup>rd</sup> Grade Math Standards

### ALGEBRA STANDARDS

**Goal 1:** Students will use the language of algebra to explore, describe, represent, and analyze number expressions and relations that represent variable quantities.

**Indicator 1:** Use procedures to transform algebraic expressions.

- 3.A.1.1. (Comprehension) Explain the relationship between repeated addition and multiplication.
- 3.A.1.2. (Knowledge) Identify special properties of 0 and 1 with respect to arithmetic operations (addition, subtraction, multiplication).

**Indicator 2:** Use a variety of algebraic concepts and methods to solve equations and inequalities.

- 3.A.2.1. (Comprehension) Select appropriate relational symbols ( $<$ ,  $>$ ,  $=$ ) to compare numbers.
- 3.A.2.2. (Application) Solve problems involving addition and subtraction of whole numbers.

**Indicator 3:** Interpret and develop mathematical models.

- 3.A.3.1. (Application) Use the relationship between multiplication and division to compute and check results.

**Indicator 4:** Analyze and describe the properties and behaviors of relations, functions, and their inverses.

- 3.A.4.1. (Comprehension) Extend linear patterns.
- 3.A.4.2. (Application) Use number patterns and relationships to learn basic facts.

### GEOMETRY STANDARDS

**Goal 2:** Students will use the language of geometry to discover, analyze, and communicate geometric concepts, properties, and relationships.

**Indicator 1:** Use deductive and inductive reasoning to recognize and apply properties of geometric figures.

- 3.G.1.1. (Comprehension) Recognize and compare the following plane and solid geometric figures: square, rectangle, triangle, cube, sphere, and cylinder.
- 3.G.1.2. (Knowledge) Identify points, lines, line segments, and rays.

**Indicator 2:** Use properties of geometric figures to solve problems from a variety of perspectives.

- 3.G.2.1. (Comprehension) Demonstrate relationships between figures using similarity and congruence.

### MEASUREMENT STANDARDS

**Goal 3:** Students will apply systems of measurement and use appropriate measurement tools to describe and analyze the world around them.

**Indicator 1:** Apply measurement concepts in practical applications.

- 3.M.1.1. (Knowledge) Read and tell time on an analog clock before the hour and after the hour within five-minute intervals.
- 3.M.1.2. (Application) Count, compare, and solve problems using a collection of coins and bills.
- 3.M.1.3. (Knowledge) Identify U.S. Customary units of length (feet), weight (pounds), capacity (gallons).
- 3.M.1.4. (Application) Select appropriate units to measure length (inch, foot, mile, yard); weight (ounces, pounds, tons); and capacity (cups, pints, quarts, gallons).
- 3.M.1.5. (Knowledge) Measure length to the nearest  $\frac{1}{2}$  inch.

### NUMBER SENSE STANDARDS

**Goal 4:** Students will develop and use number sense to investigate the characteristics of numbers in a variety of forms and modes of operation.

**Indicator 1:** Use the structural characteristics of the set of real numbers and its various subsets. Apply the concept of value, magnitude, and relative magnitude of real numbers.

- 3.N.1.1. (Comprehension) Order and compare whole numbers less than 10,000 using appropriate words and symbols.
- 3.N.1.2. (Comprehension) Find multiples of whole numbers 2, 5, and 10.
- 3.N.1.3. (Knowledge) Name and write fractions from visual representations.

**Indicator 2:** Apply operations within the set of real numbers.

- 3.N.2.1. (Application) Add and subtract whole numbers up to three digits and multiply two digits by one digit.

**Indicator 3:** Develop conjectures, predictions, or estimations to solve problems and verify or justify the results.

- 3.N.3.1. (Application) Round two-digit whole numbers to the nearest ten and three-digit whole numbers to the nearest hundred.

### STATISTICS AND PROBABILITY STANDARDS

**Goal 5:** Students will apply statistical methods to analyze data and explore probability for making decisions and predictions.

**Indicator 1:** Use statistical models to gather, analyze, and display data to draw conclusions.

- 3.S.1.1. (Application) Ask and answer questions from data represented in bar graphs, pictographs, and tally charts.
- 3.S.1.2. (Application) Gather data and use information to complete a scaled and labeled graph.

**Indicator 2:** Apply the law of probability to predict outcomes and solve problems.

- 3.S.2.1. (Comprehension) Describe events as certain or impossible.

## 4<sup>th</sup> Grade Math Standards

### ALGEBRA STANDARDS

**Goal 1:** Students will use the language of algebra to explore, describe, represent, and analyze number expressions and relations that represent variable quantities.

**Indicator 1:** Use procedures to transform algebraic expressions.

- 4.A.1.1. (Comprehension) Simplify whole number expressions involving addition, subtraction, multiplication, and division.
- 4.A.1.2. (Application) Recognize and use the commutative property of addition and multiplication.
- 4.A.1.3. (Application) Relate the concepts of addition, subtraction, multiplication, and division to one another.

**Indicator 2:** Use a variety of algebraic concepts and methods to solve equations and inequalities.

- 4.A.2.1. (Comprehension) Select appropriate relational symbols ( $<$ ,  $>$ ,  $=$ ) to make number sentences true.
- 4.A.2.2. (Application) Simplify a two-step equation using whole numbers.

**Indicator 3:** Interpret and develop mathematical models.

- 4.A.3.1. (Application) Write and solve number sentences that represent one-step word problems using whole numbers.

**Indicator 4:** Analyze and describe the properties and behaviors of relations, functions, and their inverses.

- 4.A.4.1. (Application) Solve problems involving pattern identification and completion of patterns.

### GEOMETRY STANDARDS

**Goal 2:** Students will use the language of geometry to discover, analyze, and communicate geometric concepts, properties, and relationships.

**Indicator 1:** Use deductive and inductive reasoning to recognize and apply properties of geometric figures.

- 4.G.1.1. (Knowledge) Identify the following plane and solid figures: pentagon, hexagon, octagon, pyramid, rectangular prism, and cone.
- 4.G.1.2. (Knowledge) Identify parallel, perpendicular, and intersecting lines.

**Indicator 2:** Use properties of geometric figures to solve problems from a variety of perspectives.

- 4.G.2.1. (Comprehension) Compare geometric figures using size, shape, orientation, congruence, and similarity.
- 4.G.2.2. (Knowledge) Identify a slide (translation) of a given figure.

### MEASUREMENT STANDARDS

**Goal 3:** Students will apply systems of measurement and use appropriate measurement tools to describe and analyze the world around them.

**Indicator 1:** Apply measurement concepts in practical applications.

- 4.M.1.1. (Knowledge) Identify equivalent periods of time and solve problems.

- 4.M.1.2. (Application) Solve problems involving money including unit conversion.

- 4.M.1.3. (Application) Use scales of length, temperature, capacity, and weight.

- 4.M.1.4. (Comprehension) Measure length to the nearest quarter-inch.

### NUMBER SENSE STANDARDS

**Goal 4:** Students will develop and use number sense to investigate the characteristics of numbers in a variety of forms and modes of operation.

**Indicator 1:** Use the structural characteristics of the set of real numbers and its various subsets. Apply the concept of value, magnitude, and relative magnitude of real numbers.

- 4.N.1.1. (Comprehension) Read, write, order, and compare numbers from .01 to 1,000,000.
- 4.N.1.2. (Comprehension) Find multiples of whole numbers through 12.
- 4.N.1.3. (Comprehension) Use a number line to compare numerical value of fractions or mixed numbers (fourths, halves and thirds).
- 4.N.1.4. (Application) Interpret negative integers in temperature.

**Indicator 2:** Apply operations within the set of real numbers.

- 4.N.2.1. (Application) Find the products of two-digit factors and quotient of two natural numbers using a one-digit divisor.
- 4.N.2.2. (Application) Add and subtract decimals with the same number of decimal places.

**Indicator 3:** Develop conjectures, predictions, or estimations to solve problems and verify or justify the results.

- 4.N.3.1. (Application) Estimate sums and differences in whole numbers and money to determine if a given answer is reasonable.

### STATISTICS AND PROBABILITY STANDARDS

**Goal 5:** Students will apply statistical methods to analyze data and explore probability for making decisions and predictions.

**Indicator 1:** Use statistical models to gather, analyze, and display data to draw conclusions.

- 4.S.1.1. (Application) Interpret data from graphical representations and draw conclusions.
- 4.S.1.2. (Knowledge) Given a small ordered data set of whole number data points (odd number of points), students will identify the median, mode, and range.

**Indicator 2:** Apply the law of probability to predict outcomes and solve problems.

- 4.S.2.1. (Comprehension) Determine the probability of simple events limited to equally likely and not equally likely outcomes.

## 5<sup>th</sup> Grade Math Standards

### ALGEBRA STANDARDS

**Goal 1:** Students will use the language of algebra to explore, describe, represent, and analyze number expressions and relations that represent variable quantities.

**Indicator 1:** Use procedures to transform algebraic expressions.

- 5.A.1.1. (Application) Use a variable to write an addition expression.
- 5.A.1.2. (Application) Recognize and use the associative property of addition and multiplication.

**Indicator 2:** Use a variety of algebraic concepts and methods to solve equations and inequalities.

- 5.A.2.1. (Application) Write one-step first degree equations using the set of whole numbers and find a solution.

**Indicator 3:** Interpret and develop mathematical models.

- 5.A.3.1. (Application) Write and solve number sentences that represent two-step word problems using whole numbers.
- 5.A.3.2. (Application) Identify information and apply it to a given formula.

**Indicator 4:** Analyze and describe the properties and behaviors of relations, functions, and their inverses.

- 5.A.4.1. (Application) Solve problems using patterns involving more than one operation.

### GEOMETRY STANDARDS

**Goal 2:** Students will use the language of geometry to discover, analyze, and communicate geometric concepts, properties, and relationships.

**Indicator 1:** Use deductive and inductive reasoning to recognize and apply properties of geometric figures.

- 5.G.1.1. (Knowledge) Describe and identify isosceles and equilateral triangles, pyramids, rectangular prisms, and cones.
- 5.G.1.2. (Knowledge) Identify acute, obtuse, and right angles.

**Indicator 2:** Use properties of geometric figures to solve problems from a variety of perspectives.

- 5.G.2.1. (Comprehension) Determine lines of symmetry in rectangles, squares, and triangles.
- 5.G.2.2. (Knowledge) Identify a turn or flip (rotation or reflection) of a given figure.
- 5.G.2.3. (Application) Use two-dimensional coordinate grids to find locations and represent points and simple figures.

### MEASUREMENT STANDARDS

**Goal 3:** Students will apply systems of measurement and use appropriate measurement tools to describe and analyze the world around them.

**Indicator 1:** Apply measurement concepts in practical applications.

- 5.M.1.1. (Comprehension) Determine elapsed time within an a.m. or p.m. period on the quarter-hour.
- 5.M.1.2. (Application) Solve problems involving money including making change.

- 5.M.1.3. (Application) Use and convert U.S. Customary units of length (inches, feet, yard), and weight (ounces, pounds).

- 5.M.1.4. (Application) Use appropriate tools to measure length, weight, temperature, and area in problem solving.

### NUMBER SENSE STANDARDS

**Goal 4:** Students will develop and use number sense to investigate the characteristics of numbers in a variety of forms and modes of operation.

**Indicator 1:** Use the structural characteristics of the set of real numbers and its various subsets. Apply the concept of value, magnitude, and relative magnitude of real numbers.

- 5.N.1.1. (Comprehension) Read, write, order, and compare numbers from .001 to 1,000,000,000.
- 5.N.1.2. (Comprehension) Find prime, composite, and factors of whole numbers from 1 to 50.
- 5.N.1.3. (Knowledge) Identify alternative representations of fractions and decimals involving tenths, fourths, halves, and hundredths.
- 5.N.1.4. (Comprehension) Locate negative integers on a number line.
- 5.N.1.5. (Comprehension) Determine the squares of numbers 1 – 12.

**Indicator 2:** Apply operations within the set of real numbers.

- 5.N.2.1. (Application) Find the quotient of whole numbers using two-digit divisors.
- 5.N.2.2. (Application) Determine equivalent fractions including simplification (lowest terms of fractions).
- 5.N.2.3. (Application) Multiply and divide decimals by natural numbers (1 – 9).

**Indicator 3:** Develop conjectures, predictions, or estimations to solve problems and verify or justify the results.

- 5.N.3.1. (Application) Use different estimation strategies to solve problems involving whole numbers, decimals, and fractions to the nearest whole number.

### STATISTICS AND PROBABILITY STANDARDS

**Goal 5:** Students will apply statistical methods to analyze data and explore probability for making decisions and predictions.

**Indicator 1:** Use statistical models to gather, analyze, and display data to draw conclusions.

- 5.S.1.1. (Application) Gather, graph, and interpret data.
- 5.S.1.2. (Application) Calculate and explain mean for a whole number data set.

**Indicator 2:** Apply the law of probability to predict outcomes and solve problems.

- 5.S.2.1. (Application) Classify probability of simple events as certain, likely, unlikely, or impossible.
- 5.S.2.2. (Application) Use models to display possible outcomes.

## 6<sup>th</sup> Grade Math Standards

### ALGEBRA STANDARDS

**Goal 1:** Students will use the language of algebra to explore, describe, represent, and analyze number expressions and relations that represent variable quantities.

**Indicator 1:** Use procedures to transform algebraic expressions.

- 6.A.1.1. (Application) Use order of operations, excluding nested parentheses and exponents, to simplify whole number expressions.
- 6.A.1.2. (Application) Write algebraic expressions involving addition or multiplication using whole numbers.

**Indicator 2:** Use a variety of algebraic concepts and methods to solve equations and inequalities.

- 6.A.2.1. (Application) Write and solve one-step 1<sup>st</sup> degree equations, with one variable, involving inverse operations using the set of whole numbers.

**Indicator 3:** Interpret and develop mathematical models.

- 6.A.3.1. (Knowledge) Identify and graph ordered pairs in Quadrant I on a coordinate plane.
- 6.A.3.2. (Application) Solve one-step problems involving ratios and rates.

**Indicator 4:** Analyze and describe the properties and behaviors of relations, functions, and their inverses.

- 6.A.4.1. (Comprehension) Use concrete materials, graphs, and algebraic statements to represent problem situations.

### GEOMETRY STANDARDS

**Goal 2:** Students will use the language of geometry to discover, analyze, and communicate geometric concepts, properties, and relationships.

**Indicator 1:** Use deductive and inductive reasoning to recognize and apply properties of geometric figures.

- 6.G.1.1. (Comprehension) Identify and describe the characteristics of triangles and quadrilaterals.
- 6.G.1.2. (Comprehension) Identify and describe angles.

**Indicator 2:** Use properties of geometric figures to solve problems from a variety of perspectives.

- 6.G.2.1. (Application) Use basic shapes to demonstrate geometric concepts.

### MEASUREMENT STANDARDS

**Goal 3:** Students will apply systems of measurement and use appropriate measurement tools to describe and analyze the world around them.

**Indicator 1:** Apply measurement concepts in practical applications.

- 6.M.1.1. (Comprehension) Select, use, and convert appropriate unit of measurement for a situation.
- 6.M.1.2. (Comprehension) Find the perimeter and area of squares and rectangles (whole number measurements).

### NUMBER SENSE STANDARDS

**Goal 4:** Students will develop and use number sense to investigate the characteristics of numbers in a variety of forms and modes of operation.

**Indicator 1:** Use the structural characteristics of the set of real numbers and its various subsets. Apply the concept of value, magnitude, and relative magnitude of real numbers.

- 6.N.1.1. (Comprehension) Represent fractions in equivalent forms and convert between fractions, decimals, and percents using halves, fourths, tenths, and hundredths.
- 6.N.1.2. (Knowledge) Find factors and multiples of whole numbers.

**Indicator 2:** Apply operations within the set of real numbers.

- 6.N.2.1. (Comprehension) Add, subtract, multiply, and divide decimals.

**Indicator 3:** Develop conjectures, predictions, or estimations to solve problems and verify or justify the results.

- 6.N.3.1. (Application) Use various strategies to solve one- and two-step problems involving positive decimals.

### STATISTICS AND PROBABILITY STANDARDS

**Goal 5:** Students will apply statistical methods to analyze data and explore probability for making decisions and predictions.

**Indicator 1:** Use statistical models to gather, analyze, and display data to draw conclusions.

- 6.S.1.1. (Comprehension) Find the mean, mode, and range of an ordered set of positive data.
- 6.S.1.2. (Application) Display data using bar and line graphs and draw conclusions from data displayed in a graph.

**Indicator 2:** Apply the law of probability to predict outcomes and solve problems.

- 6.S.2.1. (Knowledge) Find the probability of a simple event.