

Counting and Cardinality

Know number names and the counting sequence. Count to tell the number of objects. Identify and compare quantities of objects and numerals.

Essential Standard**I Can . . .**

K.CC.1 Count to 100 by ones and by tens.

Count to 100 by ones and by tens

K.CC.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).

Count forward beginning from a given number within the known sequence

K.CC.3 Read and write numbers using base ten numerals from 0 to 20. Represent a number of objects with a written numeral, in or out of sequence (0 represents a count of no objects).

Read and write numbers from 0- 20

K.CC.4 Understand the relationship between numbers and quantities; connect counting to cardinality.

a. When counting objects, say the numbers in the standard order. Pair each quantity of objects with one and only one number, and each number with the correct quantity of objects.

b. Understand that the last number said represents the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.

c. Understand that each successive number refers to a quantity that is one greater than the previous number.

Represent a number of objects with a written number, in or out of sequence.

Operations and Algebraic Thinking

Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

Essential Standard**I Can . . .**

K.OA.1 Represent addition and subtraction with objects, fingers, mental images, simple drawings, or sounds. For example, use clapping, act out situations, and use verbal explanations, expressions, or equations.

Understand addition as putting together and adding with objects, drawings, and equations

Understand subtraction as taking apart and taking from using objects, drawings, and equations

K.OA.5 Fluently add and subtract using numbers within 5.

Fluently add and subtract using numbers within 5

Numbers and Operations in Base Ten

Work with numbers 11-19 to gain foundations for place value.

Essential Standard**I Can . . .**

<p>K.NBT.1 Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.</p>	<p>Make or break apart numbers from 11-19 into tens and ones</p>
<p>Measurement and Data Describe and compare measurable attributes. Classify objects and count the number of objects in each category.</p>	
<p>Essential Standard</p>	<p>I Can . . .</p>
<p>K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.</p>	<p>Classify and count the number of objects in each category</p>
<p>Geometry Identify and describe shapes. Analyze, compare, create, and compose shapes.</p>	
<p>Essential Standard</p>	<p>I Can . . .</p>
<p>K.G.1 Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.</p>	<p>Identify, name, and compare 2-D and 3-D shapes</p>

Operations and Algebraic Thinking

Represent and solve problems involving addition and subtraction within 20. Understand and apply properties of operations and the relationship between addition and subtraction. Work with addition and subtraction equations.

Essential Standard**I Can . . .**

1.OA.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions. For example, use objects, drawings, and equations with a symbol for the unknown number to represent the problem.

Represent and solve addition and subtraction word problems up to 20

1.OA.6 Add and subtract within 20.

a. Use strategies such as counting on; making ten (for example, $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (for example, $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (for example, knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (for example, adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).

b. By the end of Grade 1, demonstrate fluency for addition and subtraction within 10.

Add within 20, fluent within 10

Subtract within 20, fluent within 10

Numbers and Operations in Base Ten

Extend the counting sequence. Understand place value. Use place value understanding and properties of operations to add and subtract.

Essential Standard**I Can . . .**

1.NBT.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

Count to 120, starting at any number less than 120

1.NBT.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:

a. 10 can be thought of as a bundle of ten ones, called a "ten."

b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.

c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).

Understand that the two digits of a two-digit number represent amounts of tens and ones

<p>1.NBT.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens to tens and ones to ones, and that it is sometimes necessary to compose a ten.</p>	<p>Add within 100 using a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10</p>
<p>Measurement and Data Measure lengths indirectly and by iterating length units. Tell and write time. Represent and interpret data.</p>	
<p>Essential Standards</p>	<p>I Can . . .</p>
<p>1.MD.3 Tell and write time in hours and half-hours using analog and digital clocks.</p>	<p>Tell and write time to the hour and half hour</p>
<p>Geometry Reason with shapes and their attributes.</p>	
<p>Essential Standard</p>	<p>I Can . . .</p>
<p>1.G.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.</p>	<p>Divide circles and rectangles into halves and fourths</p>

Operations and Algebraic Thinking

Represent and solve problems involving addition and subtraction. Fluently add and subtract within 20 and work with equal groups of objects to gain foundations for multiplication.

Essential Standard**I Can . . .**

2.OA.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing with unknowns in all positions, for example, by using drawings and equations with a symbol for the unknown number to represent the problem.

Use addition and subtraction within 100 to solve one- and two-step word problems

2.OA.2 Fluently add and subtract within 20.

a. Add and subtract within 20 using mental strategies such as counting on; making ten (for example, $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (for example, $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (for example, knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (for example, adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).

b. By the end of Grade 2, know from memory all sums of two one-digit numbers

Fluently add within 20 using mental strategies

Fluently subtract within 20 using mental strategies

Numbers and Operations Base 10

Understand place value. Use place value understanding and properties of operations to add and subtract.

Essential Standard**I Can . . .**

2.NBT.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; for example, 706 equals 7 hundreds, 0 tens, and 6 ones.

Understand the following as special cases:

a. 100 can be thought of as a bundle of ten tens called a "hundred."

b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).

Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones

2.NBT.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction

Fluently add within 100 using various strategies
Fluently subtract within 100 using various strategies

Measurement and Data

Measure and estimate lengths in standard units and relate addition and subtraction to length. Work with time and money. Represent and interpret data.

Essential Standard	I Can . . .
<p>2.MD.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.</p>	<p>Measure and estimate lengths in standard units using rulers and other measuring tools</p>
<p>2.MD.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.</p>	<p>Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.</p>
<p>2.MD.8 Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. For example, if you have 2 dimes and 3 pennies, how many cents do you have?</p>	<p>Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies,</p>
<p>Geometry Reason with shapes and their attributes.</p>	
Essential Standard	I Can . . .
<p>2.G.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.5 Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.</p>	<p>Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.</p>
<p>2.G.3 Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.</p>	<p>Divide circles and rectangles into equal parts</p>

Operations and Algebraic Thinking

Represent and solve problems involving multiplication and division within 100. Demonstrate understanding of the properties of multiplication and the relationship between multiplication and division. Use the four operations to identify and explain patterns in arithmetic

Essential Standard**I Can . . .**

3.OA.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Use multiplication and division within 100 to solve word problems involving equal groups, arrays, and measurement quantities

3.OA.7 Fluently multiply and divide. a. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division or properties of operations. (For example, knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$.) b. By the end of Grade 3, know from memory all products of two one-digit numbers.

Fluently multiply and divide within 100 and know from memory all products of two one-digit numbers.

Numbers and Operations in Base Ten

Use place value understanding and properties of operations to perform multi-digit arithmetic. A range of algorithms may be used.

Essential Standard**I Can . . .**

3.NBT.2 Fluently add and subtract within 1,000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Fluently add within 1,000 using strategies and algorithms.

Fluently subtract within 1,000 using strategies and algorithms.

Numbers and Operations in Fractions

Develop understanding of fractions as numbers. Denominators are limited to 2, 3, 4, 6, and 8 in third grade.

Essential Standard**I Can . . .**

3.NF.1 Understand that a unit fraction has a numerator of one and a non-zero denominator.

a. Understand a fraction $1/b$ as the quantity formed by one part when a whole is partitioned into b equal parts.

b. Understand a fraction a/b as the quantity formed by a parts of size $1/b$. For example: $1/4 + 1/4 + 1/4 = 3/4$.

Understand that a fraction is part of a whole

3.NF.2 Understand a fraction as a number on the number line; represent fractions on a number line diagram.

a. Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part

I Can...

Understand a fraction as a number on the number line; represent fractions on a number line diagram

<p>has size $1/b$ and that the endpoint of the part based at 0 locates the number $1/b$ on the number line.</p> <p><i>b. Represent a fraction a/b on a number line diagram by marking off a lengths $1/b$ from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.</i></p>	
<p>Measurement and Data Solve problems involving measurement and estimation. Represent and interpret data. Geometric measurement: understand concepts of area and relate area to multiplication and to addition. Geometric measurement: recognize perimeter.</p>	
<p>Essential Standard</p>	<p>I Can . . .</p>
<p>3.MD.C.7 Relate area to the operations of multiplication and addition.</p> <p><i>a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.</i></p> <p><i>b. Multiply side lengths to find areas of rectangles with whole- number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning</i></p> <p><i>c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.</i></p> <p><i>d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.</i></p>	<p>Understand concepts of area</p>
<p>3.MD.D.8 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.</p>	<p>Understand concepts of perimeter</p>
<p>Geometry Reason with shapes and their attributes.</p>	
<p>Essential Standard</p>	<p>I Can . . .</p>

3.G.A.1 Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.

Understand quadrilaterals and their attributes

Operations and Algebraic Thinking

Use the four operations with whole numbers (addition, subtraction, multiplication, and division) to solve problems. Gain familiarity with factors and multiples. Generate and analyze numeric and shape patterns. Demonstrate complete fluency with products of one-digit numbers.

Essential Standard**I Can . . .**

4.OA.1 Interpret a multiplication equation as a comparison (for example, interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5). Represent verbal statements of multiplicative comparisons as multiplication equations.

Interpret a multiplication equation as a comparison.

4.OA.2 Multiply or divide to solve word problems involving multiplicative comparison, for example, by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.

Multiply or divide to solve word problems involving multiplicative comparison

Numbers and Operations in Base Ten

Understand the place value system. Perform operations with multi-digit whole numbers and with decimals to hundredths.

Essential Standard**I Can . . .**

4.NBT.2 Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.

Compare two multi-digit numbers based on the meanings of the digits in each place ($>$, $<$, $=$)

4.NBT.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers

4.NBT.5 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Find whole number quotients and remainders using strategies based on place value

Numbers and Operations in Fractions

Extend understanding of equivalence and ordering of fractions. Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. Understand decimal notation to the hundredths and

compare decimal fractions with denominators of 10 and 100. Denominators for fourth grade are limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100.

Essential Standard

I Can . . .

4.NF.1 Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.

Recognize and generate equivalent fractions

4.NF.2 Compare two fractions with different numerators and different denominators, for example, by creating common denominators or numerators, or by comparing to a benchmark fraction such as $1/2$. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>$, $=$, or $<$, and justify the conclusions, for example, by using a visual fraction model.

Compare two fractions with different numerators and different denominators

4.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.

- a. Understand a fraction a/b as a multiple of $1/b$. For example, use a visual fraction model to represent $5/4$ as the product $5 \times (1/4)$, recording the conclusion by the equation $5/4 = 5 \times (1/4)$.*
- b. Understand a multiple of a/b as a multiple of $1/b$, and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express $3 \times (2/5)$ as $6 \times (1/5)$, recognizing this product as $6/5$. (In general, $n \times (a/b) = (n \times a)/b$.)*
- c. Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. For example, if each person at a party will eat $3/8$ of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?*

Solve word problems involving multiplication of a fraction by a whole number using visual fraction models and equations.

Measurement and Data

Solve problems involving measurement and conversion of measurements. Represent and interpret data. Understand concepts of angle and measure angles.

Essential Standard

I Can . . .

<p>4.MD.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two- column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...</p>	<p>Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.</p>
<p>Geometry Draw and identify lines and angles, and classify shapes by properties of their lines and angles.</p>	
<p>Essential Standard</p>	<p>I Can . . .</p>
<p>4.G.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.</p>	<p>Classify 2-D shapes by properties of their lines and angles.</p>

Operations and Algebraic Thinking

Write and interpret numerical expressions, and analyze patterns and relationships.

Essential Standard**I Can . . .**

5.OA.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols

Create and evaluate numerical expressions that include parentheses, brackets, or braces.

Numbers and Operations in Base Ten

Understand the place value system. Perform operations with multidigit whole numbers and with decimals to hundredths.

Essential Standard**I Can . . .**

5.NBT.2 Read, write, and compare decimals to thousandths. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$. Compare two decimals to thousandths based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.

Read and write decimals to thousandths using base-ten numerals, number names, and expanded form

Compare two decimals to thousandths based on meanings of the digits in each place, using $>$, $=$, and $<$

5.NBT.5 Fluently multiply multi-digit whole numbers using the standard algorithm.

Fluently multiply multi-digit whole numbers using the standard algorithm

5.NBT.7 Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. In this standard, dividing decimals is limited to a whole number dividend with a decimal divisor or a decimal dividend with a whole number divisor. Compare the value of the quotient on the basis of the values of the dividend and divisor.

Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value

Numbers and Operations in Fractions

Use equivalent fractions as a strategy to add and subtract fractions. Apply and extend previous understandings of multiplication and division to multiply and divide fractions.

Essential Standard**I Can . . .**

5.NF.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions

Add and subtract fractions with unlike denominators

<p>with like denominators. For example, $\frac{2}{3} + \frac{5}{4} = \frac{8}{12} + \frac{15}{12} = \frac{23}{12}$. (In general, $\frac{a}{b} + \frac{c}{d} = \frac{ad + bc}{bd}$.)</p>	
<p>5.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.</p> <p><i>a. Interpret the product $(\frac{a}{b}) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$ using a visual fraction model. For example, use a fraction model to show $(\frac{2}{3}) \times 4 = \frac{8}{3}$, and create a story context for this equation. Do the same with $(\frac{2}{3}) \times (\frac{4}{5}) = \frac{8}{15}$. (In general, $(\frac{a}{b}) \times (\frac{c}{d}) = \frac{ac}{bd}$.)</i></p> <p><i>b. Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.</i></p>	<p>Create visual fraction models and a story context to represent multiplication of a fraction by a whole number or a fraction.</p>
<p>5.NF.7 Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. Use strategies to divide fractions by reasoning about the relationship between multiplication and division. Division of a fraction by a fraction is not a requirement at this grade.</p> <p><i>a. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. For example, create a story context for $(\frac{1}{3}) \div 4$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $(\frac{1}{3}) \div 4 = \frac{1}{12}$ because $(\frac{1}{12}) \times 4 = \frac{1}{3}$.</i></p> <p><i>b. Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for $4 \div (\frac{1}{5})$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $4 \div (\frac{1}{5}) = 20$ because $20 \times (\frac{1}{5}) = 4$.</i></p> <p><i>c. Solve real-world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, for example, by using visual fraction models and equations to represent the problem. For example, how much chocolate will each person get if three people share $\frac{1}{2}$ lb. of chocolate equally? How many $\frac{1}{3}$-cup servings are in two cups of raisins?</i></p>	<p>Create visual fraction models and a story context to represent division of unit fractions by whole numbers and whole numbers by unit fractions and solve real-world problems.</p>

Measurement and Data

Convert like measurement units within a given measurement system. Represent and interpret data. Understand concepts of volume.

Essential Standard**I Can . . .**

5.MD.3 Recognize volume as an attribute of solid figures and understand concepts of volume measurement.

Understand and measure volume

- a. A cube with side length 1 unit, called a “unit cube,” is said to have “one cubic unit” of volume, and can be used to measure volume.*
- b. A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units.*

Geometry

Graph points on the coordinate plane to solve real-world and mathematical problems. Classify two-dimensional figures into categories based on their properties

Essential Standard**I Can . . .**

5.MD.2 Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

Solve problems using points on the coordinate plane

Ratios and Proportional Relationships

Understand ratio concepts and use ratio reasoning to solve problems.

Essential Standard**I Can . . .**

Standard 6.RP.2 Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship. The following are examples of rate language: "This recipe has a ratio of four cups of flour to two cups of sugar, so the rate is two cups of flour for each cup of sugar." "We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger." (In sixth grade, unit rates are limited to non-complex fractions.)

Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship.

The Number System

Apply and extend previous understandings of multiplication and division of whole numbers to divide fractions by fractions. Compute (add, subtract, multiply and divide) fluently with multi-digit numbers and decimals and find common factors and multiples. Apply and extend previous understandings of numbers to the system of rational numbers.

Essential Standard**I Can . . .**

Standard 6.NS.1 Interpret and compute quotients of fractions.

a. Compute quotients of fractions by fractions, for example, by applying strategies such as visual fraction models, equations, and the relationship between multiplication and division, to represent problems.

b. Solve real-world problems involving division of fractions by fractions. For example, how much chocolate will each person get if three people share $1/2$ pound of chocolate equally? How many $3/4$ -cup servings are in $2/3$ of a cup of yogurt? How wide is a rectangular strip of land with length $3/4$ mile and area $1/2$ square mile?

c. Explain the meaning of quotients in fraction division problems. For example, create a story context for $(2/3) \div (3/4)$ and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $(2/3) \div (3/4) = 8/9$ because $3/4$ of $8/9$ is $2/3$. (In general, $(a/b) \div (c/d) = ad/bc$.)

Compute quotients of fractions by fractions, explain the meaning of the quotients and solve real-world problems.

Standard 6.NS.6 Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.

Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes with negative number coordinates

- a. Recognize opposite signs of numbers as indicating locations on opposite sides of zero on the number line; recognize that the opposite of the opposite of a number is the number itself. For example, $-(-3) = 3$, and zero is its own opposite.*
- b. Understand that the signs of numbers in ordered pairs indicate their location in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.*
- c. Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.*

Expressions and Equations

Apply and extend previous understandings of arithmetic to algebraic expressions involving exponents and variables. They reason about and solve one-variable equations and inequalities. Represent and analyze quantitative relationships between dependent and independent variables in a real-world context.

Essential Standard

- 6.EE.2** Write, read, and evaluate expressions in which letters represent numbers.
- a. Write expressions that record operations with numbers and with letters representing numbers. For example, express the calculation "Subtract y from 5" as $5 - y$ and express "Jane had \$105.00 in her bank account. One year later, she had x dollars more. Write an expression that shows her new balance" as $\$105.00 + x$.*
 - b. Identify parts of an expression using mathematical terms (for example, sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity and a sum of two terms. For example, describe the expression $2(8 + 7)$ as a product of two factors; view $(8 + 7)$ as both a single entity and a sum of two terms.*
 - c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, applying the Order of Operations when there are no parentheses to specify a particular order. For example, use the formulas $V = s^3$ and $A = 6s^2$ to find the volume and surface area of a cube with sides of length $s = 1/2$.*

I Can . . .

Write, read, and evaluate expressions in which letters represent numbers.

<p>6.EE.7 Solve real-world and mathematical problems by writing and solving equations of the form $x + a = b$ and $ax = b$ for cases in which a, b and x are all nonnegative rational numbers.</p>	<p>Solve real-world and mathematical problems by writing and solving equations of the form $x + a = b$ and $ax = b$</p>
<p>Probability and Statistics Develop understanding of statistical variability of data. Summarize and describe distributions.</p>	
<p>Essential Standard</p>	<p>I Can . . .</p>
<p>6.SP.5 Summarize numerical data sets in relation to their context, such as by:</p> <ul style="list-style-type: none"> <i>a. Reporting the number of observations.</i> <i>b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.</i> <i>c. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations (for example, outliers) from the overall pattern with reference to the context in which the data were gathered.</i> <i>d. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.</i> 	<p>Understand statistical variability</p>
<p>Geometry Graph points on the coordinate plane to solve real-world and mathematical problems. Classify two-dimensional figures into categories based on their properties</p>	
<p>Essential Standard</p>	<p>I Can . . .</p>
<p>6.G.1 Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing and decomposing into rectangles, triangles and/or other shapes; apply these techniques in the context of solving real-world and mathematical problems.</p>	<p>find the area by composing and decomposing rectangles, triangles and/or other shapes.</p>