# **Range Performance Level Descriptors**

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	level	level	level	level
3.1.2.A Compose and decompose numbers up to 100,000 as a sum of so many ten thousands, so many hundreds, so many tens, and so many ones using objects, pictorial models, and numbers, including expanded notation as appropriate.	<ul> <li>Identifies the standard form of a number up to the ten thousands expressed in word form (ordered by descending place value) and represented by a graphic place-value model or a set of component place values presented in descending order.</li> <li>Identifies an expanded form of a number up to the ten thousands, including expanded notation (which includes the grouping symbols of parentheses) of a number given in standard form.</li> <li>Identifies the word form of a number up to the ten thousands expressed in expanded form ordered by descending place value.</li> </ul>	<ul> <li>Writes the standard form of a number up to the ten thousands presented in expanded notation, with place-value amounts grouped in parentheses and place-value components expressed as words and numerals.</li> <li>Identifies an expanded form of a number up to the ten thousands given in standard form, with place-value components with values greater than 9 that are not listed in descending order.</li> <li>Identifies the word form of a number up to the ten thousands presented in expanded form, including use of parentheses to group place values.</li> <li>Identifies the number up to the thousands represented by pictorial models.</li> </ul>	• Identifies and writes the standard form of a number up to 100,000 presented as a pictorial model requiring regrouping of some place- value amounts.	<ul> <li>Writes a number up to 100,000 in standard form when given an expanded form that is not in descending order of place values.</li> <li>Identifies different decomposed forms of a multi- digit number up to 100,000.</li> </ul>

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3.1.2.B Describe the mathematical relationships found in the base-10 place value system through the hundred thousands place.	Identifies equivalent place- value amounts comparing multiples of 10 or 100.	<ul> <li>Identifies and explains pictorial models representing the same number decomposed into equivalent place-value amounts.</li> <li>Identifies and explains the equivalence of a number represented as a pictorial model and represented in a word form of place value amounts.</li> </ul>	<ul> <li>Describes the relationship between the value represented by a common digit used in adjacent or nonadjacent place-value positions in the same multi- digit number.</li> <li>Given a pictorial model of a number representing one place-value amount, describes the same amount in terms of a different place value.</li> </ul>	• Describes the relationship between common digits when placed in specified nonadjacent place-value positions.
3.1.2.C Represent a number on a number line as being between two consecutive multiples of 10; 100; 1,000; or 10,000 and use words to describe relative size of numbers in order to round whole numbers.	<ul> <li>Identifies the two consecutive multiples of 10 between which a specified number lies on a number line.</li> <li>Determines the relative size of a specified number in comparison to two consecutive multiples of 10; 100; or 1,000.</li> <li>Describes the relative position of a value plotted on a number line.</li> </ul>	<ul> <li>Describes the relative position of a specified number plotted on a number line, identifying the closer of two consecutive multiples up to 1,000.</li> <li>Identifies the number line that shows a specified number plotted correctly based on given descriptors.</li> </ul>	• Creates a number line to represent a point between two specified consecutive multiples up to 10,000 and uses words to describe relative size of numbers in order to round whole numbers.	• Identifies a number that fulfills multiple descriptors of relative size and position on a number line.

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3.1.2.D Compare and order whole numbers up to 100,000 and represent comparisons using the symbols >, <, or =.	<ul> <li>Compares and orders numbers up to 100,000 by comparing the digits in the thousands, hundreds, or tens place.</li> <li>Generates a number up to 100,000 that lies between two whole numbers by comparing digits in the thousands, hundreds, or tens place.</li> </ul>	<ul> <li>Identifies or generates the number missing from a compound inequality using the appropriate symbol (&gt;, &lt;, or =).</li> <li>Given a context, identifies or writes an inequality to compare two whole numbers up to 100,000 using the appropriate symbol (&gt;, &lt;, or =).</li> <li>Compares and orders numbers up to 100,000 by comparing the digits in more than one place value.</li> </ul>	<ul> <li>Given a context, identifies or writes a compound inequality to compare three or more whole numbers up to 100,000 using the appropriate symbols (&gt;, &lt;, or =).</li> <li>Generates a number that satisfies a compound inequality. Writes a number that satisfies place-value conditions of ordering involving both &gt; and &lt; symbols.</li> </ul>	<ul> <li>Given a context, identifies or writes a compound inequality to compare three or more whole numbers up to 100,000 using the appropriate symbols (&gt;, &lt;, or =).</li> </ul>
3.1.3.A Represent fractions greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines.	<ul> <li>Identifies the fraction represented by an area model, a set model, or a strip diagram.</li> <li>Creates or represents a specific fraction using an area model, a set model, or a strip diagram.</li> </ul>	<ul> <li>Writes a fraction represented by an area model, a set model, or a strip diagram.</li> <li>Creates or represents fractions using pictorial models, including strip diagrams and number lines, when given a context.</li> </ul>	<ul> <li>When given a context, writes fractions represented by concrete and pictorial models, including strip diagrams and number lines.</li> </ul>	<ul> <li>Creates or represents two or more fractions using pictorial models, including strip diagrams and number lines, when given a context.</li> </ul>

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3.1.3.B Determine the corresponding fraction greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 given a specified point on a number line.	• Identifies a fraction greater than zero and less than 1 with a denominator of 2, 3, 4, 6, or 8 when given a specified point on a number line.	<ul> <li>Identifies a fraction equal to 1 with a denominator of 2, 3, 4, 6, or 8 when given a specified point on a number line.</li> </ul>	• Writes the corresponding fraction greater than zero and less than 1 or equal to 1 with a denominator of 2, 3, 4, 6, or 8 given a specified point on a number line.	• Writes the corresponding fraction equal to 1 with a denominator of 2, 3, 4, 6, or 8 given a specified point on a number line.
3.1.3.C Explain that the unit fraction 1/ <i>b</i> represents the quantity formed by one part of a whole that has been partitioned into <i>b</i> equal parts where <i>b</i> is a non-zero whole number.	<ul> <li>Represents a unit fraction with a pictorial model.</li> <li>Describes a unit fraction as one part of a whole that has been partitioned into <i>b</i> equal parts.</li> </ul>	• Given a visual model or a context, represents or describes a unit fraction as one part of a whole that has been partitioned into <i>b</i> equal parts.	• Determines whether a visual model of a unit fraction is valid. Provides an explanation based on the definition of a unit fraction.	• Classifies visual models as valid or invalid models of unit fractions. Justifies classifications based on the definition of a unit fraction.
3.1.3.D Compose and decompose a fraction <i>a/b</i> with a numerator greater than zero and less than or equal to <i>b</i> as a sum of parts 1/ <i>b</i> .	<ul> <li>Given a contextual situation or a fraction model, identifies a fraction as a sum of unit fractions.</li> <li>Completes a fraction model to represent a given sum of unit fractions.</li> </ul>	<ul> <li>Decomposes a fraction into the sum of unit fractions.</li> <li>Given a contextual situation involving a fraction of a whole, decomposes a fraction into an equation of unit fractions.</li> </ul>	• Given a graphic representation of a fraction of a group, identifies the sum that represents a specified fraction of the group.	<ul> <li>Represents a decomposed form of a specified fraction using various diagrams.</li> </ul>

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3.1.3.E Solve problems involving partitioning an object or a set of objects among two or more recipients using pictorial representations of fractions with denominators of 2, 3, 4, 6, and 8.	<ul> <li>Given a fraction model, identifies or writes the fractional amount given to each recipient after partitioning an object or a set of objects among 2 or more recipients.</li> </ul>	• Given a graphic representation of a group, identifies the fraction representing the fraction of the group in each of <i>x</i> equal shares.	• Identifies the fraction representing a fraction of a whole representing <i>x</i> equal parts of a total of <i>y</i> parts.	• Given a graphic representation of a group, writes a fraction representing the fraction of the group in each of <i>x</i> equal shares.
3.1.3.F Represent equivalent fractions with denominators of 2, 3, 4, 6, and 8 using a variety of objects and pictorial models, including number lines.	<ul> <li>Identifies equivalent fractions represented by points on one or more number lines.</li> <li>Given a shaded fraction model, completes a model to represent an equivalent fraction for the given fraction model.</li> </ul>	<ul> <li>Given a fraction strip model, identifies equivalent fractions for the given model.</li> </ul>	• Given one or more shaded fraction models, identifies equivalent fractions represented by models.	<ul> <li>Identifies two fractions that represent an equivalent unit fraction plotted as a point on a number line.</li> <li>Identifies the number line and shaded fraction model that represent equivalent fractions.</li> </ul>
3.1.3.G Explain that two fractions are equivalent if and only if they are both represented by the same point on the number line or represent the same portion of a same size whole for an area model.	• Determines and explains whether two fractions are equivalent by comparing area models of the same size whole.	<ul> <li>Given two or more fraction models, determines which models represent equivalent fractions and justifies the conclusion.</li> <li>Given a point plotted on a number line, identifies two equivalent fractions and explains why the two fractions are equivalent.</li> </ul>	<ul> <li>Explains that two fractions are equivalent if they represent the same distance from zero when plotted on a number line.</li> <li>Explains that two fractions are equivalent if they represent the same portion of a same size whole in an area model.</li> </ul>	• Given two models of equivalent fractions, uses information from the models to explain why the two fractions are equivalent.

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3.1.3.H Compare two fractions having the same numerator or denominator in problems by reasoning about their sizes and justifying the conclusion using symbols, words, objects, and pictorial models.	• Identifies a valid comparison of two fractions with the same denominator based on comparison of the numerators of the fractions or the relative size of the shaded portion in fraction models.	• Identifies a valid comparison of two fractions having the same numerator based on the relative size of each part of the whole or the amount of each whole shaded in fraction models.	• Identifies a valid comparison of two fractions with the same numerator based on the relative magnitude of the denominators when given a fraction strip model or a contextual situation.	• Compares two fractions that have the same denominator by comparing the position of each fraction to a specified value on a number line.
3.1.4.I Determine if a number is even or odd using divisibility rules.	<ul> <li>Identifies an even or odd number that appears in a group.</li> <li>Identifies a group that contains only even numbers.</li> </ul>	<ul> <li>Describes an even number as a number that can be divided into 2 equal groups and an odd number as a number that cannot be divided evenly by 2.</li> <li>Identifies a group of numbers that contains only odd numbers.</li> <li>Identifies the odd numbers that appear in a group.</li> </ul>	• Determines whether a number is even or odd using divisibility rules.	• Explains that the product of any number and 2 will always be an even number because the product could be divided evenly by two.
3.1.7.A Represent fractions of halves, fourths, and eighths as distances from zero on a number line.	<ul> <li>Identifies halves and fourths as distances from zero on a number line.</li> <li>Identifies the fraction represented by a point on a number line between zero and 1.</li> </ul>	<ul> <li>Identifies the number line that represents a given fraction.</li> <li>Represents fractions of eighths as distances from zero on a number line.</li> </ul>	<ul> <li>Identifies the fraction of halves, fourths, and eighths that is the greatest or least distance from zero on a number line.</li> </ul>	• Creates a number line that represents a specified fraction as a distance from zero.

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3.2.4.A Solve with fluency one- step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction.	<ul> <li>Uses strategies to solve a one- step problem involving addition and subtraction up to 1,000 with or without regrouping without context.</li> </ul>	<ul> <li>Uses strategies to solve a one-step problem involving addition and subtraction up to 1,000 with or without regrouping given a context.</li> <li>Uses strategies to solve a two-step problem involving addition and subtraction up to 1,000 with or without regrouping.</li> </ul>	• Uses strategies to solve one- step and two-step problems involving addition and subtraction up to 1,000 with or without regrouping given a context.	<ul> <li>Uses strategies to solve one- step and two-step problems involving addition and subtraction up to 1,000 with regrouping, when given a table of data to analyze.</li> </ul>
3.2.4.B Round to the nearest 10 or 100 or use compatible numbers to estimate solutions to addition and subtraction problems.	<ul> <li>Rounds to the nearest 10 or uses compatible numbers to estimate solutions to addition and subtraction problems within a problem context.</li> <li>Uses an appropriate strategy to estimate the sum or difference of three two-digit numbers when given a problem context.</li> </ul>	<ul> <li>Uses an appropriate strategy to estimate the sum or difference of two or more two-digit and three-digit numbers when given a problem context.</li> <li>Rounds two or more one- digit and two-digit numbers to the nearest 10 to determine an estimate of the sum or difference when given a problem context.</li> </ul>	<ul> <li>Uses rounding or compatible numbers to determine the sum or difference of two or more two-digit and three-digit numbers presented as part of a graphic representation.</li> <li>Rounds two three-digit numbers to the nearest 100 to determine an estimate of a sum or difference within context.</li> </ul>	<ul> <li>Solves a multi-step problem in context by rounding three-digit numbers to the nearest 100.</li> <li>Solves a problem in context by rounding a group of two-digit numbers to the nearest 10 to determine a sum or difference.</li> </ul>

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3.2.4.D Determine the total number of objects when equally sized groups of objects are combined or arranged in arrays up to 10 by 10.	<ul> <li>Identifies the total number of objects in <i>x</i> groups of <i>y</i> objects when a picture of one complete group is shown and the total is less than 50.</li> <li>Identifies the total number of objects in <i>x</i> groups of <i>y</i> objects when a picture of one complete group is shown and either <i>x</i> or <i>y</i> is 10.</li> </ul>	<ul> <li>Identifies the total number of objects in <i>x</i> groups of <i>y</i> objects when a picture of one complete group is shown and the total is greater than 50.</li> <li>Writes the total number of objects in <i>x</i> groups of <i>y</i> objects when a picture of one complete group is shown and the total is greater than 50.</li> </ul>	<ul> <li>Identifies the total number of objects in <i>x</i> groups of <i>y</i> objects, given values in a contextual situation without art.</li> <li>Writes the total number of objects in <i>x</i> groups of <i>y</i> objects, given values in a contextual situation without art.</li> </ul>	<ul> <li>Given the total number of objects in a group, completes a statement that describes how the objects can be arranged into <i>x</i> equal rows.</li> <li>Given the total number of objects in a group, identifies two arrays/groupings of equal amounts into which the objects could be placed.</li> </ul>
3.2.4.E Represent multiplication facts by using a variety of approaches such as repeated addition, equal-sized groups, arrays, area models, equal jumps on a number line, and skip counting.	<ul> <li>Represents multiplication facts up to 5 × 5 using various approaches.</li> </ul>	<ul> <li>Represents multiplication facts up to 10 × 10 using various approaches.</li> </ul>	<ul> <li>Represents multiplication facts up to 12 × 12 using various approaches.</li> </ul>	• Represents multiplication facts up to 12 × 12 using various approaches given a context.

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3.2.4.F Recall facts to multiply up to 10 by 10 with automaticity and recall the corresponding division facts.	<ul> <li>Identifies the product of a multiplication fact with a product less than 50.</li> <li>Identifies the missing factor for a multiplication fact with a product less than 50.</li> </ul>	<ul> <li>Writes the product of a multiplication fact with a product less than 50 and recalls the corresponding division fact.</li> <li>Writes the missing factor for a multiplication fact with a product less than 50 and recalls the corresponding division fact.</li> </ul>	<ul> <li>Writes the product of a multiplication fact with a product up to 100 and recalls the corresponding division fact.</li> <li>Writes the missing factor for a multiplication fact with a product up to 100 and recalls the corresponding division fact.</li> </ul>	<ul> <li>Writes the product of a multiplication fact with a product up to 100 and recalls the corresponding division fact when given a context.</li> <li>Determines the product for a multiplication fact with a product up to 100 and recalls the corresponding division fact when given a context and records the product using the correct place value.</li> </ul>
3.2.4.G Use strategies and algorithms, including the standard algorithm, to multiply a two-digit number by a one- digit number. Strategies may include mental math, partial products, and the commutative, associative, and distributive properties.	<ul> <li>Identifies the product of a two- digit and a one-digit number with no regrouping.</li> <li>Identifies the product of a two- digit and a one-digit number less than 5, with some regrouping.</li> </ul>	<ul> <li>Identifies the product of a two-digit and a one-digit number less than 5, regrouping ones to tens and tens to hundreds.</li> <li>Identifies the product of a two-digit and a one-digit number greater than 4, with no regrouping.</li> </ul>	<ul> <li>Writes the product of a two-digit multiple of 10 and a one-digit number.</li> <li>Writes the product of a two-digit number and a one-digit number with grouping required for tens to hundreds.</li> <li>Identifies the product of a two-digit number and a one-digit number and a one-digit number greater than 4, regrouping ones to tens and tens to hundreds.</li> </ul>	<ul> <li>Writes the product of a two- digit number and a one-digit number greater than 5 with grouping required for ones to tens and tens to hundreds.</li> </ul>

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3.2.4.H Determine the number of objects in each group when a set of objects is partitioned into equal shares or a set of objects is shared equally.	<ul> <li>Identifies the number of objects, <i>x</i>, in each of <i>y</i> equal shares, given the number of groups and an organized graphic (not an array) of <i>x</i> objects.</li> <li>Given an array of objects in which neither rows nor columns represent the number of groups involved in the task, identifies the number of objects in each of a specified number of shares.</li> </ul>	<ul> <li>Given a picture of the number of groups into which a specified number of objects will be equally divided, writes the number of objects that will go into each equal group.</li> <li>Given a non-array grouping of <i>x</i> objects, writes the number of objects that will go into each of <i>y</i> equal groups.</li> </ul>	<ul> <li>Completes a statement defining <i>x</i> groups of <i>y</i> objects to represent a specified number of objects.</li> <li>Identifies a grouping of equal amounts that represents a specified number of objects in a contextual situation.</li> </ul>	<ul> <li>Identifies different ways to equally share a specified number of objects.</li> </ul>
3.2.4.J Determine a quotient using the relationship between multiplication and division.	<ul> <li>Identifies the statement representing the quotient of a division problem presented in context along with an explanation justifying the solution.</li> <li>Identifies the multiplication fact that can be used to determine the solution to a division problem given as an equation.</li> </ul>	<ul> <li>Completes a multiplication equation that can be used to represent a division problem presented in context.</li> <li>Identifies a multiplication fact that can be used to determine a quotient.</li> </ul>	<ul> <li>Completes a statement that describes the quotient of a division problem and the multiplication fact that justifies the solution.</li> <li>Identifies a multiplication fact that can be used to determine a quotient.</li> </ul>	<ul> <li>Given two or more related multiplication and division facts with missing values, identifies the number that makes both equations true.</li> <li>Writes a multiplication fact that can be used to determine the quotient for a division problem.</li> </ul>

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3.2.4.K Solve one-step and two- step problems involving multiplication and division within 100 using strategies based on objects; pictorial models, including arrays, area models, and equal groups; properties of operations; or recall of facts.	<ul> <li>Identifies the solution to a one- step division problem with a dividend that is divided evenly by 5 or 10.</li> <li>Identifies the solution to a one- step problem involving division of a two-digit number by a one- digit number, where the tens digit is a multiple of the divisor.</li> </ul>	<ul> <li>Identifies the solution to a one-step problem involving division of a two-digit number by a one-digit number greater than 5 that is not a factor of the tens digit.</li> <li>Identifies the solution to a two-step problem involving multiplication and division with a multiple of 10 and a one-digit number.</li> <li>Identifies the solution to a two-step problem involving multiplication and division with a multiple of 10 and a one-digit number.</li> </ul>	<ul> <li>Writes the solution to a two- step problem including multiplication and addition of two-digit and one-digit numbers.</li> <li>Solves a one-step problem involving multiplication of a two-digit number by 5 (regrouping required).</li> </ul>	Writes the solution to a two- step problem involving all four operations with one-digit and two-digit numbers.
3.2.5.A Represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations.	<ul> <li>Identifies equations that represent one- and two-step problems involving addition and subtraction of whole numbers up to 100.</li> </ul>	• Uses equations to represent one- and two-step problems involving addition and subtraction of whole numbers up to 100.	• Uses pictorial models, number lines, and tables to represent one- and two-step problems involving addition and subtraction of whole numbers up to 1,000.	<ul> <li>Identifies equations, pictorial models, and number lines that represent the solution to a two-step problem involving addition and subtraction of whole numbers up to 1,000.</li> </ul>

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3.2.5.B Represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations.	<ul> <li>Uses arrays and strip diagrams to represent multiplication and division facts.</li> <li>Identifies an equation that represents a one-step multiplication or division problem within 100.</li> </ul>	<ul> <li>Identifies an equation that represents a two-step multiplication or division problem.</li> <li>Identifies the model that represents a two-step multiplication or division problem.</li> <li>Completes an equation to represent a two-step problem involving multiplication and division within 100 when given arrays and strip diagrams.</li> </ul>	<ul> <li>Completes and solves an equation that represents a division model for a one-step problem.</li> <li>Completes an equation to represent a two-step problem involving multiplication and division within 100.</li> </ul>	<ul> <li>Creates an equation to solve a multi-step multiplication or division word problem that may include all four operations.</li> </ul>
3.2.5.C Describe a multiplication expression as a comparison such as 3 x 24 represents 3 times as much as 24.	<ul> <li>Recognizes when a verbal description represents a multiplication problem.</li> </ul>	<ul> <li>Identifies a multiplication expression that represents a given verbal comparative statement.</li> </ul>	<ul> <li>Identifies a verbal comparative statement that represents a given multiplication expression.</li> </ul>	<ul> <li>Writes an expression that represents a verbal comparative statement.</li> <li>Identifies multiple representations of the same multiplicative comparison (expressions, verbal descriptions).</li> </ul>
3.2.5.D Determine the unknown whole number in a multiplication or division equation relating three whole numbers when the unknown is either a missing factor or product.	<ul> <li>Identifies the product of two one-digit numbers.</li> <li>Identifies the unknown factor in a multiplication equation.</li> <li>Identifies the unknown divisor in a division equation.</li> </ul>	<ul> <li>Writes the unknown divisor in a division equation.</li> <li>Writes the unknown factor in a multiplication equation.</li> </ul>	<ul> <li>Identifies a multiplication or division equation with a missing value, which will be true when a specified number is used for the missing value.</li> <li>Identifies the missing dividend in a division equation.</li> </ul>	<ul> <li>Identifies related multiplication/division equations for which the missing value is the same number.</li> </ul>

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3.2.5.E Represent real-world relationships using number pairs in a table and verbal descriptions.	<ul> <li>Identifies a table or verbal description that represents an additive or subtractive relationship in both mathematical and real-world contexts.</li> </ul>	• Identifies a verbal description of number pairs that are related by multiplication.	• Identifies the table that represents number pairs that are related by division.	• Writes a verbal description that explains the relationships between number pairs in a table.
3.3.6.A Classify and sort two- and three-dimensional figures, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language.	<ul> <li>Classifies and labels two- and three-dimensional figures based on attributes, using formal geometric language.</li> </ul>	<ul> <li>Classifies and identifies attributes that define two- and three-dimensional figures that belong to the same category.</li> </ul>	<ul> <li>Classifies and sorts two- and three-dimensional figures based on attributes, using formal geometric language.</li> </ul>	<ul> <li>Identifies the attributes used to classify and sort groups of two- or three-dimensional figures.</li> </ul>
3.3.6.B Use attributes to recognize rhombuses, parallelograms, trapezoids, rectangles, and squares as examples of quadrilaterals and draw examples of quadrilaterals that do not belong to any of these subcategories.	<ul> <li>Identifies the group of two- dimensional figures that does not include a specific quadrilateral.</li> <li>Uses attributes to identify rhombuses, parallelograms, trapezoids, rectangles, and squares.</li> </ul>	<ul> <li>Uses attributes to recognize a quadrilateral does not belong to one or more subcategories.</li> <li>Uses attributes to classify quadrilaterals into groups.</li> </ul>	<ul> <li>Uses attributes to recognize a group of shapes that are all rhombuses, parallelograms, trapezoids, rectangles, or squares.</li> <li>Identifies one or more subcategories that a quadrilateral belongs to.</li> </ul>	<ul> <li>Uses attributes to identify rhombuses, parallelograms, trapezoids, rectangles, and squares, and writes one or more subcategories these figures belong to.</li> </ul>
3.3.6.C Determine the area of rectangles with whole number side lengths in problems using multiplication related to the number of rows times the number of unit squares in each row.	<ul> <li>Identifies the area of a rectangle given the length and width in a contextual situation.</li> <li>Identifies the area of a rectangle represented by an area model.</li> </ul>	<ul> <li>Identifies the area of an array.</li> </ul>	• Writes the area of a rectangle displayed as an area model or an array.	• Writes the area of a rectangle given the length and width in a contextual situation without a pictorial model.

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3.3.6.D Decompose composite figures formed by rectangles into non-overlapping rectangles to determine the area of the original figure using the additive property of area.	<ul> <li>Identifies the area of a composite figure formed by two rectangles on a grid.</li> </ul>	<ul> <li>Identifies the area of a figure that is decomposed into two or more rectangles on a grid.</li> <li>Identifies the area of a figure that is decomposed into two or more rectangles on a grid that shows the length and width of each non-overlapping rectangle.</li> </ul>	• Decomposes a composite figure and identifies its area when it is displayed on a grid that shows only the length and width of each non- overlapping rectangle.	<ul> <li>Writes the area of a composite shape on a grid, but without the individual gridlines showing through.</li> </ul>
3.3.6.E Decompose two congruent two-dimensional figures into parts with equal areas and express the area of each part as a unit fraction of the whole and recognize that equal shares of identical wholes need not have the same shape.	<ul> <li>Identifies a pair of fraction models shaded to represent the same fraction, both models being the same size and having the same number of parts but having different-shaped parts.</li> </ul>	• Given two sets of fraction models of the same size, identifies or describes the set of fraction models that represent equal shares of identical wholes partitioned into different shapes.	<ul> <li>Given a fraction model that is shaded to represent a fraction, identifies a fraction model of the same size but with parts of different shapes, that is shaded to represent the same amount.</li> <li>Identifies a pair of congruent figures shaded to represent the same fraction, given that the shapes are divided into parts with equal areas but different shapes.</li> </ul>	• Explains that equal shares of identical wholes need not have the same shape.
3.3.7.B Determine the perimeter of a polygon or a missing length when given perimeter and remaining side lengths in problems.	<ul> <li>Identifies the shape that has a specific perimeter when all side lengths are labeled.</li> <li>Identifies the perimeter of a polygon when all side lengths are given.</li> </ul>	<ul> <li>Identifies the side length of a square given the perimeter.</li> </ul>	<ul> <li>Identifies the missing side length of a polygon when given the perimeter and remaining side lengths.</li> </ul>	<ul> <li>Identifies the length of a rectangle given the perimeter and width.</li> </ul>

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3.3.7.C Determine the solutions to problems involving addition and subtraction of time intervals in minutes using pictorial models or tools such as a 15-minute event plus a 30-minute event equals 45 minutes.	<ul> <li>Identifies the number of minutes spent completing one or more activities.</li> </ul>	<ul> <li>Determines the solutions to problems involving addition and subtraction of 15-minute time intervals using a number line.</li> <li>Identifies the start time or end time when given a context.</li> </ul>	<ul> <li>Identifies the total time elapsed and end time for completing one or more activities.</li> </ul>	• Uses pictorial models or tools to identify the start or end time for one or more activities when given the time intervals in context.
3.3.7.D Determine when it is appropriate to use measurements of liquid volume (capacity) or weight.	<ul> <li>Identifies a customary unit that can be used to measure liquid volume (capacity).</li> </ul>	<ul> <li>Identifies a metric unit that can be used to measure liquid volume (capacity).</li> <li>Identifies an appropriate unit used to measure weight.</li> </ul>	• Determines when it is appropriate to use measurements of liquid volume (capacity) or weight.	• Justifies and explains when it is appropriate to use measurements of liquid volume (capacity) or weight.
3.3.7.E Determine liquid volume (capacity) or weight using appropriate units and tools.	<ul> <li>Identifies a reasonable unit of measure for liquid volume or weight.</li> <li>Identifies the model that best represents a specified liquid volume or weight.</li> </ul>	<ul> <li>Estimates liquid volume or weight depicted in models or described in context.</li> </ul>	<ul> <li>Uses tools to determine liquid volume (capacity) in metric or customary units or weight in customary units.</li> </ul>	<ul> <li>Justifies why certain units or tools would be more appropriate based on the given item to be measured.</li> </ul>
3.4.4.C Determine the value of a collection of coins and bills.	<ul> <li>Identifies a collection of coins and bills (with coin amounts less than \$1.00) that has a specified value.</li> <li>Determines the value of a collection of coins and bills (with coin amounts less than \$1.00).</li> </ul>	<ul> <li>Determines the value of a collection of coins and bills (with coin amounts greater than \$1.00).</li> <li>Identifies two or more collections of coins and bills (with coin amounts less than \$1.00) that have the same value.</li> </ul>	• Identifies two or more collections of coins and bills (with coin amounts greater than \$1.00) that have the same value.	• Describes two or more collections of coins and bills that have the same value, where the value is greater than \$1.00.

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3.4.8.A Summarize a data set with multiple categories using a frequency table, dot plot, pictograph, or bar graph with scaled intervals.	<ul> <li>Summarizes data given in a table or contextual form using a dot plot, pictograph, or bar graph with or without scaled intervals.</li> <li>Identifies the data set summarized by a frequency table, dot plot, pictograph, or bar graph with scaled intervals.</li> </ul>	<ul> <li>Completes a statement about errors in representations that summarize data sets.</li> <li>Identifies a representation that includes a specified data point or a data set.</li> </ul>	<ul> <li>Identifies errors in representations that summarize a data set with more than 10 data points.</li> <li>Identifies a different way to summarize data when given a frequency table, dot plot, pictograph, or bar graph with scaled intervals.</li> </ul>	<ul> <li>Identifies the frequency table that correctly represents data on a scaled bar graph for which not all values align to an interval of the graph scale.</li> <li>Identifies multiple representations that summarize a given data set.</li> </ul>
3.4.8.B Solve one- and two-step problems using categorical data represented with a frequency table, dot plot, pictograph, or bar graph with scaled intervals.	<ul> <li>Solves one-step "how many more" or "how many less" questions using a scaled bar graph where all data points are multiples of the scale interval.</li> <li>Solves a one-step problem involving addition or subtraction of values represented by pictographs or frequency tables.</li> </ul>	<ul> <li>Solves a one-step problem involving addition or subtraction of values represented by dot plots, pictographs, or frequency tables.</li> <li>Solves one-step "how many more" or "how many less" questions using a scaled bar graph.</li> </ul>	<ul> <li>Solves a two-step problem involving addition or subtraction using categorical data represented by dot plots, pictographs, frequency tables, or bar graphs with scaled intervals.</li> </ul>	• Solves two-step problems with context using categorical data represented by dot plots, pictographs, frequency tables, or bar graphs with scaled intervals.
3.4.9.A Explain the connection between human capital/labor and income.	<ul> <li>Identifies factors that influence income.</li> <li>Identifies an example of income.</li> </ul>	<ul> <li>Identifies a factor influencing income when given a context.</li> </ul>	<ul> <li>Identifies a contextual situation that illustrates the connection between human capital/labor and income.</li> </ul>	<ul> <li>Identifies a statement that describes the relationship between human capital/labor and income.</li> </ul>
3.4.9.B Describe the relationship between the availability or scarcity of resources and how that impacts cost.	<ul> <li>Completes a statement that describes how the availability or scarcity of resources impacts cost.</li> </ul>	<ul> <li>Identifies a statement that describes how the availability or scarcity of resources impacts cost.</li> </ul>	• Describes how a decrease in resource availability impacts cost in a problem context.	• Describes how an increase in resources impacts cost in a problem context.

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3.4.9.D Explain that credit is used when wants or needs exceed the ability to pay and that it is the borrower's responsibility to pay it back to the lender, usually with interest.	<ul> <li>Identifies the difference between the loan amount and the repayment amount.</li> </ul>	<ul> <li>Identifies an example of credit use that would require repayment.</li> <li>Explains the difference between the loan amount and the repayment amount.</li> </ul>	• Explains when credit is used and the borrower's responsibility to repay the lender.	<ul> <li>Identifies a real-world situation that describes the use of a credit card from a list.</li> </ul>
3.4.9.E List reasons to save and explain the benefit of a savings plan, including for college.	• Identifies a benefit of a savings plan.	<ul> <li>Identifies a positive result of having a savings plan when given a problem context.</li> </ul>	<ul> <li>Identifies beneficial features of a savings plan when given a problem context.</li> </ul>	<ul> <li>Identifies several beneficial features of a savings plan when given a problem context.</li> </ul>

