

**CORRELATIONS
COMMON CORE STATE STANDARDS (CCSS) FOR MATHEMATICS
SERIES YABISÍ (SANTILLANA) – FOURTH GRADE**

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Operations and Algebraic Thinking 4.OA				
Use the four operations with whole numbers to solve problems.				
1. Interpret a multiplication equation as a comparison, e.g., 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.	72-75	54-57	22-23	
2. Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.	165, 167, 169	147, 149, 151	57, 59	
3. Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent	184-185, 192	166-167, 174	67-68	

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these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.				
Gain familiarity with factors and multiples.				
4. Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.	72-75, 86, 89, 170-171, 188-189, 210-211	54-57, 68, 71, 152-153, 170-171, 192-193	22-25, 60, 65-66	
Generate and analyze patterns.				
5. Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. <i>For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.</i>	36-37, 302	20-21, 284	11	

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Number and Operations in Base Ten 4.NBT				
Generalize place value understanding for multi-digit whole numbers.				
1. Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. <i>For example, recognize that $700 \div 70 = 10$ by applying concepts of place value and division.</i>	170-171, 178-179, 188-189, 194, 198	152-153, 160-161, 170-171, 176, 180	60, 65-66	
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.	26-31, 38, 68-69	10-13, 22, 50-51	6-8, 12	<i>Juego y repaso: 2</i>
3. Use place value understanding to round multi-digit whole numbers to any place.	34-35, 41, 56-57, 172-173, 190-191	18-19, 25, 38-39, 154-155	10, 18, 61, 69, 71	
Use place value understanding and properties of operations to perform multi-digit arithmetic.				
4. Fluently add and subtract multi-digit whole numbers using the standard algorithm.	48-55	30-37	14-17, 20-21	
5. Multiply a whole number of up to	162-169	144-151	56-59	

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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.				
6. 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.	92-95, 104, 182-187	74-77, 86, 164-167	30-31, 36-37, 64, 67-68, 70-71	
Number and Operations— Fractions 4.NF				
Extend understanding of fraction equivalence and ordering.				
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.	208-211, 222, 225	190-191, 207	74-75	

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<p>2. Compare two fractions with different numerators and different denominators, e.g., 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, e.g., by using a visual fraction model.</p>	212-213, 222	194-195, 204	75	
<p>Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.</p>				
<p>3. Understand a fraction a/b with $a > 1$ as a sum of fraction $1/b$.</p> <p>a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.</p> <p>b. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. <i>Examples:</i> $3/8 = 1/8 + 1/8 +$</p>	214-221, 228, 252	196-203, 210, 234	76-80	<i>Juego y repaso: 5</i>

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<p>$1/8$; $3/8 = 1/8 + 2/8$; $2\ 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8$.</p> <p>c. Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.</p> <p>d. Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.</p>				
<p>4. Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.</p> <p>a. Understand a fraction a/b as a multiple of $1/b$. <i>For example, use a visual fraction model to represent $5/4$ as the product $5 \times (1/4)$, recording the conclusion by the equation $5/4 = 5 \times (1/4)$.</i></p> <p>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. <i>For</i></p>	210-211, 214-215	192-193, 196-197	75, 81	

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<p><i>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, $n \times (a/b) = (n \times a)/b$.)</i></p> <p>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. <i>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?</i></p>				
<p>Understand decimal notation for fractions, and compare decimal fractions.</p>				
<p>5. Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. <i>For example, express $3/10$ as $30/100$, and add $3/10 + 4/100 = 34/100$.</i></p>	N/A			
<p>6. Use decimal notation for fractions with denominators 10 or 100. <i>For example, rewrite 0.62 as $62/100$; describe a length as 0.62</i></p>	232-233, 238-239	214-215, 220-221	82-83, 84, 88	

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<i>meters; locate 0.62 on a number line diagram.</i>				
7. Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual model.	234-237	216-219	84, 86	
Measurement and Data 4.MD				
Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.				
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. <i>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,</i>	138-147, 150, 158-159, 256-267	120-125, 128-129, 132, 140-141, 238-249	48-50, 52-53, 90-97	

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36), ...				
2. Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	139, 145, 148-149, 152, 154 256-257, 262-263	121, 127, 130-131, 134, 136-137, 238, 239, 244-245	49, 51, 53, 90-97	
3. Apply the area and perimeter formulas for rectangles in real world and mathematical problems. <i>For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.</i>	138-139, 150	120-121, 130	48-49	<i>Juego y repaso: 14</i>
Represent and interpret data.				
4. Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Solve problems involving addition and subtraction of fractions by using information presented in line plots. <i>For example, from a line plot find and interpret the difference in length</i>	269	251		

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<i>between the longest and shortest specimens in an insect collection.</i>				
Geometric measurement: understand concepts of angle and measure angles.				
<p>5. Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:</p> <p>a. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $\frac{1}{360}$ of a circle is called a "one-degree angle," and can be used to measure angles.</p> <p>b. An angle that turns through n one-degree angles is said to have an angle measure of n degrees.</p>	116-117, 133	98-99, 115	38-39	
6. Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	116-117	98-99	38, 47	
7. Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the	116-117	98-99		

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whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.				
Geometry 4.G				
Draw and identify lines and angles, and classify shapes by properties of their lines and angles.				
1. Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines, identify these in two-dimensional figures.	112-117, 134	94-99, 116	38-39, 47	
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.	118-119, 124-125	100-101, 106-107	38, 43, 47	
3. Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.	126-127	108-109	44, 46	

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Deleted Content Grade 4				
Apply divisibility rules for 2, 5, and 10.	92-95	74-77	30-31	
Explain the effect on the product when one of the factors is changed.	76-77	58-59	24	
Analyze the magnitude of the digits through hundredths on the basis of their place value.	N/A <i>(See Grade 3, Chapter 2.)</i>			
Illustrate situations that show change over time as either increasing, decreasing or varying.	N/A			
Analyze the relationship between three-dimensional geometric shapes in the form of cubes, rectangular prisms, and cylinders and their two-dimensional nets.	122-123	104-105	42	
Predict the results of multiple transformations of the same type—translation, reflection, or rotation on a two-dimensional geometric shape.	128-129 <i>(Also, see Grade 3, Chapter 10)</i>	110-111	45	
Represent two-dimensional shapes: trapezoids, rhombuses, and parallelograms and three-dimensional shapes: cubes, rectangular prisms, and cylinders.	122-123	104-105	40, 42-43, 47	
Use transformation(s) to prove congruency.	128-129	110-111	45	

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Represent with ordered pairs of whole numbers the location of points in the first quadrant of a coordinate grid.	286-287	268-269	102, 107	<i>Análisis de datos: 10-11</i>
Illustrate possible paths from one point to another along vertical and horizontal grid lines in the first quadrant of the coordinate plane.	286-287	268-269		<i>Análisis de datos: 3, 7</i> <i>Juego y repaso: 7-9</i>
Use appropriate tools to measure objects to the nearest unit: measuring length in quarter inches, centimeters, and millimeters; measuring liquid volume in cups, quarts, and liters; and measuring weight and mass in pounds, milligrams, and kilograms.	138, 150, 157, 158, 268-269	120, 130, 139-140, 250-251	48, 91	
Analyze the perimeter of a polygon.	N/A			
Generate strategies to determine the area of rectangles and triangles.	138-139	120-121	48	
Use Celsius and Fahrenheit thermometers to determine temperature changes during time intervals.	143	125		
Exemplify situations in which highly accurate measurements are required.	N/A			

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Compare how data-collection methods impact survey results.	278-279	260-261	98	
Interpret data in tables, line graphs, and bar graphs whose scale increments are greater than or equal to 1.	280-281, 284-285, 298-299	262-263, 266-267, 280-281	99, 101, 106	<i>Análisis de datos: 9, 14-16</i>
Organize data in tables, line graphs, and bar graphs whose scale increments are greater than or equal to 1.	281, 285	263, 267	99, 101	
Distinguish between categorical and numerical data and match to graphs.	280-281, 283, 285, 297	262-263, 265, 267, 279	99	<i>Análisis de datos: 2, 5, 8-9, 12</i>
Predict on the basis of data whether events are <i>likely, unlikely, certain, impossible, or equally likely</i> to occur.	292-293	274-275		
Analyze possible outcomes for a simple event.	294-295	276-277, 278	105	