

New York State Next Generation Mathematics Learning Standards

Grade 4 Crosswalk

Operations and Algebraic Thinking

Cluster	NYS P-12 CCLS	NYS Next Generation Learning Standard
	<p>e.g., interpret <math>35 = 5 \times 7</math> 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.</p>	<p><b>NY-4.OA.1</b> Interpret a multiplication equation as a comparison. Represent verbal statements of multiplicative comparisons as multiplication equations. e.g.,</p> <ul style="list-style-type: none"> <li>• Interpret <math>35 = 5 \times 7</math> as a statement that 35 is 5 times as many as 7 or 7 times as many as 5.</li> <li>• Represent “Four times as many as eight is thirty-two” as an equation, <math>4 \times 8 = 32</math>.</li> </ul>
	<p><b>4.OA.2</b> 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.</p> <p><b>4.OA.3</b> 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 these problems using equations with a letter standing for the unknown quantity.</p>	<p><b>NY-4.OA.2</b> Multiply or divide to solve word problems involving multiplicative comparison, distinguishing multiplicative comparison from additive comparison. Use drawings and equations with a symbol for the unknown number to represent the problem.</p>

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<b>Gain familiarity with factors and multiples.</b>	<b>4.OA.4</b> 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.	<b>NY-4.OA.4</b> 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.

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Number and Operations in Base Ten

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<p><b>Generalize place value understanding for multi-digit whole numbers.</b></p>	<p><b>4.NBT.1</b> 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 <math>700 \div 70 = 10</math> by applying concepts of place value and division.</i></p> <p><u>Note:</u> Grade 4 expectations in this domain are limited to whole numbers less than or equal to 1,000,000.</p>	<p><b>NY-4.NBT.1</b> 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.</p> <p>e.g., Recognize that <b><math>70 \times 10 = 700</math> (and, therefore, <math>700 \div 10 = 70</math>)</b> by applying concepts of place value, <b>multiplication</b>, and division.</p> <p><u>Note:</u> Grade 4 expectations are limited to whole numbers less than or equal to 1,000,000.</p>
	<p><b>4.NBT.2</b> 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 <math>&gt;</math>, <math>=</math>, and <math>&lt;</math> symbols to record the results of comparisons.</p> <p><u>Note:</u> Grade 4 expectations in this domain are limited to whole numbers less than or equal to 1,000,000.</p>	<p><b>NY-4.NBT.2a.</b> Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form.</p> <p>e.g., <math>50,327 = 50,000 + 300 + 20 + 7</math></p> <p><b>NY-4.NBT.2b</b> Compare two multi-digit numbers based on meanings of the digits in each place, using <math>&gt;</math>, <math>=</math>, and <math>&lt;</math> symbols to record the results of comparisons.</p> <p><u>Note:</u> Grade 4 expectations are limited to whole numbers less than or equal to 1,000,000.</p>

**4.NBT.3** Use place value understanding to round multi-digit whole numbers to any place.

Note: Grade 4 expectations in this domain are limited to whole numbers less than or equal to 1,000,000.

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Number and Operations in Base Ten

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<b>Use place value understanding and properties of operations to perform multi-digit arithmetic.</b>	<b>4.NBT.4</b> Fluently add and subtract multi-digit whole numbers using <del>the</del> standard algorithm.  <u>Note:</u> Grade 4 expectations in this domain are limited to whole numbers less than or equal to 1,000,000.	<b>NY-4.NBT.4</b>

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Number and Operations - Fractions

Cluster

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Grade 4 Crosswalk

Number and Operations - Fractions

Cluster	NYS P-12 CCLS	NYS Next Generation Learning Standard
<p><b>Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.</b></p>	<p><b>4.NF.3</b> Understand a fraction <math>a/b</math> with <math>a &gt; 1</math> as a sum of fractions <math>1/b</math>.</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> <math>3/8 = 1/8 + 1/8 + 1/8</math>; <math>3/8 = 1/8 + 2/8</math>;  <math>2 \frac{1}{8} = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8</math>.</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><u>Note:</u> Grade 4 expectations are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.</p>	<p><b>NY-4.NF.3</b> Understand a fraction <math>-</math> with <math>a &gt; 1</math> as a sum of fractions <math>\frac{1}{-}</math>.</p> <p><b>Note:</b> <math>-</math> refers to the unit fraction for <math>-</math>.</p> <p><b>NY-4.NF.3a</b> Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.</p> <p><b>NY-4.NF.3b</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.</p> <p>e.g., by using a visual fraction model such as, but not limited to:</p> <ul style="list-style-type: none"> <li>• <math>\frac{3}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8}</math></li> <li>• <math>\frac{3}{8} = \frac{1}{8} + \frac{2}{8}</math></li> <li>• <math>2 \frac{1}{8} = 1 + 1 + \frac{1}{8} = \frac{8}{8} + \frac{8}{8} + \frac{1}{8}</math></li> </ul> <p><b>NY-4.NF.3c</b> Add and subtract mixed numbers with like denominators.</p> <p>e.g., replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.</p> <p><b>NY-4.NF.3d</b> Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators.</p>



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Number and Operations - Fractions

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<p><b>Understand decimal notation for fractions, and compare decimal fractions.</b></p>	<p><b>4.NF.5</b> 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 <math>3/10</math> as <math>30/100</math>, and add <math>3/10 + 4/100 = 34/100</math>.</i></p> <p>Students who c</p>	



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Measurement and Data

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Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	4.MD.1	





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Geometry

Cluster	NYS P-12 CCLS	NYS Next Generation Learning Standard
<p><b>Draw and identify lines and angles, and classify shapes by properties of their lines and angles.</b></p>	<p><b>4.G.1</b> Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.</p>	