

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 $35 = 5 \times 7$ 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.</p>	<p>NY-4.OA.1 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"> • Interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 or 7 times as many as 5. • Represent “Four times as many as eight is thirty-two” as an equation, $4 \times 8 = 32$.
	<p>4.OA.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.</p> <p>4.OA.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 these problems using equations with a letter standing for the unknown quantity.</p>	<p>NY-4.OA.2 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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Gain familiarity with factors and multiples.	4.OA.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.	NY-4.OA.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.

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Number and Operations in Base Ten

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<p>Generalize place value understanding for multi-digit whole numbers.</p>	<p>4.NBT.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></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>NY-4.NBT.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.</p> <p>e.g., Recognize that $70 \times 10 = 700$ (and, therefore, $700 \div 10 = 70$) by applying concepts of place value, multiplication, 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>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.</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>NY-4.NBT.2a. Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form.</p> <p>e.g., $50,327 = 50,000 + 300 + 20 + 7$</p> <p>NY-4.NBT.2b Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ 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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Use place value understanding and properties of operations to perform multi-digit arithmetic.	4.NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm. <u>Note:</u> Grade 4 expectations in this domain are limited to whole numbers less than or equal to 1,000,000.	NY-4.NBT.4

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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>Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.</p>	<p>4.NF.3 Understand a fraction a/b with $a > 1$ as a sum of fractions $1/b$.</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> $3/8 = 1/8 + 1/8 + 1/8$; $3/8 = 1/8 + 2/8$; $2 \frac{1}{8} = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8$.</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><u>Note:</u> Grade 4 expectations are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.</p>	<p>NY-4.NF.3 Understand a fraction $-$ with $a > 1$ as a sum of fractions $\frac{1}{-}$.</p> <p>Note: $-$ refers to the unit fraction for $-$.</p> <p>NY-4.NF.3a Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.</p> <p>NY-4.NF.3b 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"> • $\frac{3}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$ • $\frac{3}{8} = \frac{1}{8} + \frac{2}{8}$ • $2 \frac{1}{8} = 1 + 1 + \frac{1}{8} = \frac{8}{8} + \frac{8}{8} + \frac{1}{8}$ <p>NY-4.NF.3c 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>NY-4.NF.3d 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>Understand decimal notation for fractions, and compare decimal fractions.</p>	<p>4.NF.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> <p>Students who c</p>	

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Measurement and Data

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