

New York State Next Generation Mathematics Learning Standards

Grade 5 Crosswalk

Operations and Algebraic Thinking

Cluster	NYS P-12 CCLS	NYS Next Generation Learning Standard
Write and interpret numerical expressions.		



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Number and Operations - Fractions

Cluster	NYS P-12 CCLS	NYS Next Generation Learning Standard
<p><b>Use equivalent fractions as a strategy to add and subtract fractions.</b></p>	<p><b>5.NF.1</b> 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 with like denominators. <i>For example, <math>2/3 + 5/4 = 8/12 + 15/12 = 23/12</math>. (In general, <math>a/b + c/d = (ad + bc)/bd</math>.)</i></p>	<p><b>NY-5.NF.1</b> 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 with like denominators.</p> <p>e.g.,</p> <p>&lt; <math>- + - = - + - = -</math></p> <p>&lt; <math>- + - = - + - = -</math></p>
	<p><b>5.NF.2</b> Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. <i>For example, recognize an incorrect result <math>2/5 + 1/2 = 3/7</math>, by observing that <math>3/7 &lt; 1/2</math>.</i></p>	

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Number and Operations - Fractions

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<p><b>Apply and extend previous understandings of multiplications and division to multiply and divide fractions.</b></p>	<p><b>5.NF.3</b> Interpret a fraction as division of the numerator by the denominator (<math>a/b = a \div b</math>). Solve word problems involving a multiplication or a division of whole numbers leading to a fraction or mixed number result. (e.g., Use a rectangular area model to represent <math>4 \times \frac{3}{5}</math> as <math>\frac{12}{5}</math> and <math>20 \div \frac{3}{4}</math> as <math>20 \times \frac{4}{3}</math>.)</p>	

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Number and Operations - Fractions

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<p><b>Apply and extend previous understandings of multiplications and division to multiply and divide fractions.</b></p>	<p><b>5.NF.4</b> Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.</p> <p>a. Interpret the product <math>(a/b) \times q</math> as <math>a</math> parts of a partition of <math>q</math> into <math>b</math> equal parts; equivalently, as the result of a sequence of operations <math>a \times q \div b</math>. <i>For example, use a visual fraction model to show <math>(2/3) \times 4 = 8/3</math>, and create a story context for this equation. Do the same with <math>(2/3) \times (4/5) = 8/15</math>. (In general, <math>(a/b) \times (c/d) = ac/bd</math>.)</i></p> <p>b. Find the area of a rectangle with fractional side lengths by tiling it with <del>unit squares</del> 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 fracti8 240.29 3598004 1358.27 r</p>	



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Number and Operations - Fractions

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<p><b>Apply and extend previous understandings of multiplication and division to multiply and divide fractions.</b></p>	<p>...previous understandings of multiplication and division by whole numbers and fractions.</p> <p>...non-zero denominator. For example, <math>\frac{2}{3} \times \frac{4}{5} = \frac{8}{25}</math> and <math>\frac{2}{3} \div \frac{4}{5} = \frac{2}{3} \times \frac{5}{4} = \frac{10}{12} = \frac{5}{6}</math>.</p> <p>c. Solve word problems involving multiplication of a fraction by a whole number. For example, how much chocolate will each person get if 3 people share <math>\frac{1}{2}</math> lb of chocolate equally? How many <math>\frac{1}{3}</math>-cup servings are in <math>\frac{2}{3}</math> cup of raisins?</p> <p><u>Note:</u> Students able to multiply fractions in general can develop a general algorithm for multiplying fractions.</p>	



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Measurement and Data

Cluster	NYS P-12 CCLS	NYS Next Generation Learning Standard
<p><b>Convert like measurement units within a given measurement system.</b></p>	<p><b>5.MD.1</b> Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.</p>	<p><b>NY-5.MD.1</b> Convert among different-sized standard measurement units within a given measurement system <b>when the conversion factor is given.</b> Use these conversions in solving multi</p>





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**Geometry**

**Cluster**