

**Twin Rivers School District  
Grade Five Common Core Math Pacing  
2017-2018**

**Trimester 2**

<b>Pretest (optional) November 13</b>
<ul style="list-style-type: none"> <li><b>Trimester 2 Pretest Exam</b> Use the information as an additional pacing tool to guide instruction.</li> </ul>
<b>Beyond the Basic Facts</b>
<ul style="list-style-type: none"> <li><b>BTBF is recommended to be done daily</b> During trimester 2, students will continue to work on multiplication/division fluency.</li> </ul>

**Unit 5: Add Fractions**

<b>Instructional Window (11 days): November 14 – December 7</b>				
<b>Standard(s)</b>				
<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. 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>.)</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. For example, recognize an incorrect result <math>2/5 + 1/2 = 3/7</math>, by observing that <math>3/7 &lt; 1/2</math>.</p>				
<b>T.E. pg. #</b>	<b>SJ pg. #</b>	<b>Lesson Topic</b> * = optional lesson (c) = combine lessons	<b>Standard</b>	<b>Lesson Focus</b>
		<b>Lesson 1</b> Simplify Fractions ( <i>m</i> )	5.NF.1	C
		<b>Lesson 2</b> Simplify Fractions ( <i>m</i> )	5.NF.1	P
		<b>Lesson 3</b> Reasonable Estimates: Fraction Sums ( <i>m</i> )	5.NF.2	C
		<b>Lesson 4</b> Convert between Mixed Numbers and Improper Fractions	5.NF.4a	P

*m*-major cluster, *s*-supporting cluster, *a*-additional cluster, *discovery*-possible discovery lesson

		<b>Lesson 5</b> Add Fractions with Unlike Denominators Using an Area Model <i>(m)</i>	5.NF.1, 2	C
		<b>Lesson 6</b> Add Fractions with Unlike Denominators Using an Area Model <i>(m)</i>	5.NF.1, 2	P
		<b>Lesson 7</b> Add Fractions with Unlike Denominators Using a Number Line <i>(m)</i>	5.NF.1, 2	C
		<b>Lesson 8</b> Add Fractions with Unlike Denominators Using a Number Line <i>(m)</i>	5.NF.1, 2	P
		<b>Lesson 9</b> Add Fractions with Unlike Denominators Using an Algorithm <i>(m)</i>	5.NF.1, 2	C
		<b>Lesson 10*</b> Add Fractions with Unlike Denominators Using an Algorithm <i>(m)</i>	5.NF.1, 2	P
		<b>Lesson 11</b> Add Fractions <i>(m)</i>	5.NF.1, 2	MT
<b>Suggested Unit 5 Assessment Date – December 8 &amp; 11</b>				

## Unit 6: Subtract Fractions

<b>Instructional Window (13 days): December 12 – January 16</b>				
<b>Standard(s)</b>				
<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. For example, <math>\frac{2}{3} + \frac{5}{4} = \frac{8}{12} + \frac{15}{12} = \frac{23}{12}</math>. (In general, <math>\frac{a}{b} + \frac{c}{d} = \frac{ad + bc}{bd}</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. For example, recognize an incorrect result <math>\frac{2}{5} + \frac{1}{2} = \frac{3}{7}</math>, by observing that <math>\frac{3}{7} &lt; \frac{1}{2}</math>.</p>				
<b>T.E. pg. #</b>	<b>SJ pg. #</b>	<b>Lesson Topic</b> * = optional lesson (c) = combine lessons	<b>Standard</b>	<b>Lesson Focus</b>
		<b>Lesson 1</b> Reasonable Estimates: Fraction Differences <i>(m)</i>	5.NF.1, 2	C

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		<b>Lesson 2</b> Subtract Fractions with Unlike Denominators Using an Area Model (without regrouping) <i>(m)</i>	5.NF.1, 2	C
		<b>Lesson 3</b> Subtract Fractions with Unlike Denominators Using an Area Model (without regrouping) <i>(m)</i>	5.NF.1, 2	P
		<b>Lesson 4</b> Subtract Fractions with Unlike Denominators Using a Number Line <i>(m)</i>	5.NF.1, 2	C
		<b>Lesson 5</b> Subtract Fractions with Unlike Denominators Using a Number Line <i>(m)</i>	5.NF.1, 2	P
		<b>Lesson 6*</b> Subtract Fractions with Unlike Denominators Using an Algorithm <i>(m)</i>	5.NF.1, 2	C
		<b>Lesson 7</b> Subtract Fractions with Unlike Denominators Using an Algorithm <i>(m)</i>	5.NF.1, 2	P
		<b>Lesson 8</b> Subtract Fractions with Unlike Denominators Using an Area Model (with regrouping) <i>(m)</i>	5.NF.1, 2	C
		<b>Lesson 9</b> Subtract Fractions with Unlike Denominators Using an Area Model (with regrouping) <i>(m)</i>	5.NF.1, 2	P
		<b>Lesson 10*</b> Subtract Fractions with Regrouping Using an Algorithm <i>(m)</i>	5.NF.1, 2	C
		<b>Lesson 11</b> Subtract Fractions with Regrouping Using an Algorithm <i>(m)</i>	5.NF.1, 2	P
		<b>Lesson 12</b> Subtract Fractions <i>(m)</i>	5.NF.1, 2	MT
<b>Suggested Unit 6 Assessment Date – January 17 &amp; 18</b>				

### Unit 7: Multiply Fractions

<b>Instructional Window (14 days):</b>	<b>January 19 – February 8</b>
<b>Standard(s)</b>	

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**5.NF.3:** Interpret a fraction as division of the numerator by the denominator ( $a/b = a \div b$ ). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. For example, interpret  $3/4$  as the result of dividing 3 by 4, noting that  $3/4$  multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size  $3/4$ . If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?

**5.NF.4:** Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.

- Interpret the product  $(a/b) \times q$  as a parts of a partition of  $q$  into  $b$  equal parts; equivalently, as the result of a sequence of operations  $a \times q \div b$ . For example, use a visual fraction model to show  $(2/3) \times 4 = 8/3$ , and create a story context for this equation. Do the same with  $(2/3) \times (4/5) = 8/15$ . (In general,  $(a/b) \times (c/d) = ac/bd$ .)
- Find the area of a rectangle with fractional side lengths by tiling it with unit squares 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 fraction products as rectangular areas.

**5.NF.5:** Interpret multiplication as scaling (resizing), by:

- Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.
- Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence  $a/b = (n \times a)/(n \times b)$  to the effect of multiplying  $a/b$  by 1.

**5.NF.6:** Solve real-world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

T.E. pg. #	SJ pg. #	Lesson Topic * = optional lesson (c) = combine lessons	Standard	Lesson Focus
		<b>Lesson 1</b> Fractions as Division ( <i>m</i> )	5.NF.3	C
		<b>Lesson 2*</b> Fractions as Division ( <i>m</i> )	5.NF.3	P
		<b>Lesson 3</b> Reason about Multiplying Fractions ( <i>m</i> )	5.NF.5a	C
		<b>Lesson 4</b> Reason about Multiplying Fractions ( <i>m</i> )	5.NF.5a	P
		<b>Lesson 5(c)</b> Reason about Multiplying Fractions by One ( <i>m</i> )	5.NF.5b	C
		<b>Lesson 6(c)</b> Reason about Multiplying Fractions by One ( <i>m</i> )	5.NF.5b	P
		<b>Lesson 7</b> Reason about Multiplying a Fraction by a Fraction ( <i>m</i> )	5.NF.4b	C
		<b>Lesson 8</b> Multiply Fractions Using an Area Model ( <i>m</i> )	5.NF.4b	C

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		<b>Lesson 9</b> Multiply Fractions Using an Area Model <i>(m)</i>	5.NF.4b	P
		<b>Lesson 10</b> Multiply Fractions Using an Algorithm <i>(m)</i>	5.NF.4a	P
		<b>Lesson 11</b> Solve Word Problems by Multiplying Fractions Using an Algorithm <i>(m)</i>	5.NF.4a, 6	P
		<b>Lesson 12</b> Multiply Fractions <i>(m)</i>	5.NF.3-6	MT

**Suggested Unit 7 Assessment Date – February 9 & 12**

### Unit 8: Divide Fractions

**Instructional Window (8 days): February 13 – February 26**

#### Standard(s)

**5.NF.7:** Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.

- Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. For example, create a story context for  $(1/3) \div 4$ , and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that  $(1/3) \div 4 = 1/12$  because  $(1/12) \times 4 = 1/3$ .
- Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for  $4 \div (1/5)$ , and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that  $4 \div (1/5) = 20$  because  $20 \times (1/5) = 4$ .
- Solve real-world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. For example, how much chocolate will each person get if 3 people share  $1/2$  lb of chocolate equally? How many  $1/3$ -cup servings are in 2 cups of raisins?

T.E. pg. #	SJ pg. #	Lesson Topic * = optional lesson (c) = combine lessons	Standard	Lesson Focus
		<b>Lesson 1</b> Divide a Unit Fraction by a Whole Number-Word Problems <i>(m)</i>	5.NF.7a, c	C
		<b>Lesson 2</b> Divide a Unit Fraction by a Whole Number-Create a Story <i>(m)</i>	5.NF.7a	C
		<b>Lesson 3</b> Divide a Unit Fraction by a Whole Number <i>(m)</i>	5.NF.7a, c	P

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		<b>Lesson 4</b> Divide a Whole Number by a Unit Fraction-Word Problems <i>(m)</i>	5.NF.7b, c	C
		<b>Lesson 5</b> Divide a Whole Number by a Unit Fraction-Create a Story <i>(m)</i>	5.NF.7b, c	C
		<b>Lesson 6</b> Divide a Whole Number by a Unit Fraction <i>(m)</i>	5.NF.7b, c	P
		<b>Lesson 7*</b> Word Problems Involving Unit Fractions and Whole Numbers <i>(m)</i>	5.NF.7a-c	P
		<b>Lesson 8</b> Divide Fractions <i>(m)</i>	5.NF.7a-c	MT
<b><i>Suggested OPTIONAL Unit 8 Assessment Date – February 27 &amp; 28</i></b>				

### End of Trimester 2 Assessments

<b><i>Suggested Review for Trimester 2 Cumulative Benchmark Date – March 1</i></b> <b><i>Suggested Trimester 2 Cumulative Benchmark Date – March 2 &amp; 5</i></b> <b><i>Performance Task – March 6 &amp; 7</i></b>
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