

Unit Name	Investigations	Sessions	Math Main Ideas	Assessments
UNIT 7 - RACES, ARRAYS, and GRIDS <i>Rational Numbers 3: Multiplication and Division</i>	1 - 3	26 Approx. 26-30 days		Checklists, Games, Quizzes and Unit Test
<p>5.NBT.A.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and $1/10$ of what it represents in the place to its left.</p> <p>5.NBT.A.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.</p> <p>5.NBT.A.3a Read, write, and compare decimals to thousandths. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form.</p> <p>5.NBT.A.3b Read, write, and compare decimals to thousandths. Compare two decimals to thousandths based on meanings of the digits in each place, using $>$, $=$, and $<$, symbols to record the results of comparisons.</p> <p>5.NBT.A.4 Use place value understanding to round decimals to any place.</p> <p>5.NBT.B.5 Fluently multiply multi-digit whole numbers using the standard algorithm.</p> <p>5.NBT.B.6 Find whole-number quotients of whole numbers with up to four-digit dividends and two-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.</p> <p>5.NBT.B.7 Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.</p> <p>5.NF.B.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.</p> <p>5.NF.B.4a 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 $a \times q \div b$.</p> <p>5.NF.B.4b Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. 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.</p> <p>5.NF.B.5a 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.</p> <p>5.NF.B.5b Interpret multiplication as scaling (resizing), by: 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.</p> <p>5.NF.B.6 Solve real world problems involving multiplication of fractions and mixed number</p> <p>5.NF.B.7a 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.</p> <p>5.NF.B.7b Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. Interpret division of a whole number by a unit fraction, and compute such quotients.</p> <p>5.NF.B.7c Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions.</p> <p>5.MD.A.1 Convert among different-sized standard measurement units within a given measurement system, and use these conversions in solving multi-step, real world problems.</p> <p>5.OA.A.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.</p> <p>5.OA.B.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane</p> <p>5.NF.A.1 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>5.G.B.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.</p> <p>5.G.B.4 Classify two-dimensional figures in a hierarchy based on properties</p>	<p>1 – MULTIPLYING AND DIVING FRACTIONS</p> <p>2 – FRACTIONS AS DIVISION</p> <p>3- MULTIPLYING AND DIVIDING DECIMALS</p>	<p>1.1-1.11</p> <p>2.1-2.4</p> <p>3.1-3.11</p>	<p>Multiplying and dividing fractions, mixed numbers and whole numbers</p> <p>Interpreting Fractions as Division</p> <p>Multiplying with Decimals Dividing with Decimals Converting Measurements</p>	<p>A53 Multiplication with Fractions, Mixed Numbers, and Whole Numbers 1.8</p> <p>A54-55 Quiz 1.10</p> <p>A56 Dividing with Fractions 1.11</p> <p>A58-59 Quiz 2.2.4</p> <p>A62 Multiplying Decimals 3.5</p> <p>A63 Quiz 3 3.10</p> <p>A64 Dividing Decimals 3.11</p> <p>UNIT 7 TEST</p>