**Curriculum Coverage in 6th Grade Mathematics for the 2018-2019 School Year as Outlined by TN Standards.**

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| **TN Standards Major Work of the Grade (70%):**   * **Multiply and divide fractions** * **Apply system of rational numbers** * **Understand ratio concepts** * **Use ratio reasoning** * **Arithmetic with algebraic expressions** * **Solve one-variable equations and inequalities** * **Represent relationships between independent/dependent variables** | **Supporting (30%):**   * **Compute fluently with multi-digit numbers** * **Solve area, surface area, and volume problems** * **Understand statistical variability** * **Summarize and describe distributions** |

[**The Standards for Mathematical Practice**](http://www.corestandards.org/Math/Practice)

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| **MP1. Make sense of problems and persevere in solving them.** | **MP2. Reason abstractly and quantitatively.** | **MP3. Construct viable arguments and critique the reasoning of others.** | **MP4. Model with mathematics.** |
| **MP5. Use appropriate tools strategically.** | **MP6. Attend to precision.** | **MP7. Look for and make use of structure.** | **MP8. Look for and express regularity in repeated reasoning.** |

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| **TN Standards** | **Learning Outcomes** | **Instructional Focus** | **Content** |
| **Number Systems** | | | | |
| **6**.**NS.B.2** Fluently divide multi digit numbers using the standard algorithm | I can fluently divide multi-digit whole numbers using the standard algorithm. | ENTER HERE | **Go Math Lesson:**  Lesson 5.1 Dividing Whole Numbers (pg. 107)  **Engage NY Task:**  [Grade 6 Mathematics Module 2, Topic C](https://www.engageny.org/resource/grade-6-mathematics-module-2-topic-c-overview) (5.1) |
| **6.NS.B.3** Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation | I can fluently add and subtract multi-digit decimals using the standard algorithm.  I can fluently multiply multi-digit decimals using the standard algorithm.  I can fluently divide multi-digit decimals using the standard algorithm. | ENTER HERE | **Go Math Lesson:**  Lesson 5.2 Adding and Subtracting Decimals (pg. 113)  Lesson 5.3 Multiplying Decimals (pg. 119)  Lesson 5.4 Dividing Decimals  **Engage NY Task:**  [Grade 6 Mathematics Module 2, Topic B](https://www.engageny.org/resource/grade-6-mathematics-module-2-topic-b-overview) (5.2 and 5.3)  [Grade 6 Mathematics Module 2, Topic C](https://www.engageny.org/resource/grade-6-mathematics-module-2-topic-c-overview) (5.4) |
| **6.NS.B.4** Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1-100 with a common factor as a multiple of a sum of two whole numbers with no common factor. | I can find the greatest common factor of two whole numbers less than or equal to 100.  I can find the least common multiple of two whole numbers less than or equal to 12.  I can use the distributive property to express a common factor as a multiple of a sum of two whole numbers with no common factor. | ENTER HERE | **Go Math Lesson:**  Lesson 2.1 Greatest Common Factor (pg. 31)  Lesson 2.2 Least Common Multiple (pg. 37)  **Engage NY Task:**  [Grade 6 Mathematics Module 2, Topic D](https://www.engageny.org/resource/grade-6-mathematics-module-2-topic-d-overview) (2.1 and 2.2) |
| **6.NS.A.1** Interpret and compute quotients of fractions and solve contextual problems involving division of fractions by fractions, (e.g., using visual fraction models and equations to represent the problem is suggested.) | I can apply GCF and LCM to fraction operations.  I can solve problems involving the division of fractions by fractions.  I can solve problems involving dividing mixed numbers.  I can solve multi-step problems with fractions and mixed numbers.  I can apply operations with rational numbers. | Students should extend their understanding of division of fractions by fractions by making the generalization that multiplication and division are inverse operations. As students have grasped a conceptual understanding of division of fractions by fractions, they should be able to explain and interpret that ½ ÷ 1/6 = 3 because 3 is how many 1/6 of ½, which results in the multiplicative inverse of ½ x 6/1 = 3/1. This multiplication equation can be used to obtain the division equation directly, using the relationship between multiplication and division. As students deepen this understanding, they should be able to solve mathematical and contextual problems that involve partitive and quotative division problems, involving the division of fractions by fractions, and explain the solution using precise mathematical vocabulary. | **Go Math Lesson:**  Lesson 4.1 Applying GCF and LCM to Fraction Operations (pg. 79)  Lesson 4.2 Dividing Fractions (pg. 85)  Lesson 4.3 Dividing Mixed Numbers (pg. 91)  Lesson 4.4 Solving Multistep Problems with Fractions and Mixed Numbers (pg. 97)  Lesson 5.5 Applying Operations with Rational Numbers (pg. 131)  **Engage NY Task:**  [Grade 6 Mathematics Module 2, Topic D](https://www.engageny.org/resource/grade-6-mathematics-module-2-topic-d-overview) (4.1)  [Grade 6 Mathematics Module 2, Topic A](https://www.engageny.org/resource/grade-6-mathematics-module-2-topic-overview) (4.2, 4.3, and 4.4)  [Grade 6 Mathematics Module 2, Topic B](https://www.engageny.org/resource/grade-6-mathematics-module-2-topic-b-overview) (5.5)  [Grade 6 Mathematics Module 2, Topic C](https://www.engageny.org/resource/grade-6-mathematics-module-2-topic-c-overview) (5.5) |
| **6.NS.C.5** Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation. | I can understand that integers are used to describe quantities having opposite directions or values. | ENTER HERE | **Go Math Lesson:**  Lesson 1.1 Identifying Integers and Their Opposites (pg. 7, Explore Activity 1)  **Engage NY Task:**  [Grade 6 Mathematics Module 3, Topic A](https://www.engageny.org/resource/grade-6-mathematics-module-3-topic-overview) |
| **6.NS.C.6a** Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., -(-3)=3, and that 0 is its own opposite. | I can recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line. | As students deepen their understandings, they should be able to explain the connection that exists between horizontal and vertical number lines and the coordinate plane. Using a discovery learning approach, students should be able to make generalizations around the signs of ordered pairs within the four quadrants of the coordinate plane. Students should be able to identify which quadrant a point is located based on the signs of the ordered pairs. For example, an ordered pair where both signs are positive (+,+) lies in Quadrant I. This generalization should be coupled with the understanding that changing the sign of one or both numbers in the ordered pair will create a reflection of the point. As students make these connections and generalizations, students should display their knowledge with verbal and written explanation using precise mathematical language. | **Go Math Lesson:**  Lesson 1.1 Identifying Integers and Their Opposites (pg. 8, Explore Activity 2)  **Engage NY Task:**  [Grade 6 Mathematics Module 3, Topic A](https://www.engageny.org/resource/grade-6-mathematics-module-3-topic-overview) (1.1) |
| **6.NS.C.6.b** Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes. | I can understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane. | **Go Math Lesson:**  12.1 Graphing on the Coordinate Plane (pg. 331)  **Engage NY Task:**  [Grade 6 Mathematics Module 3, Topic C](https://www.engageny.org/resource/grade-6-mathematics-module-3-topic-c-overview) (12.1) |
| **6.NS.C.6c** Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane. | I can find and position integers and other rational numbers on a number line. | **Go Math Lesson:**  Lesson 1.1 Identifying Integers and Their Opposites (pg. 9, Example 1)  **Engage NY Task:**  [Grade 6 Mathematics Module 3, Topic A](https://www.engageny.org/resource/grade-6-mathematics-module-3-topic-overview) (1.1) |
| **6.NS.C.7a** Interpret statements of inequality as statements about the relative position of two numbers on a number line. | I can compare and order integers on a number line. | Students should extend their understanding by creating contextual situations that involve ordering rational numbers. This should be done by comparing rational numbers using inequality symbols and justifying their reasoning with verbal and written explanations, including using a number line. Students should also be able to explain the relationship between absolute values and magnitude of quantities in context. As students solidify their understanding of absolute value, they should be able to explain that as the value of a negative number decreases, its absolute value increases using precise mathematical language. | **Go Math Lesson:**  Lesson 1.2 Comparing and Ordering Integers (pg. 13)  **Engage NY Task:**  [Grade 6 Mathematics Module 3, Topic B](https://www.engageny.org/resource/grade-6-mathematics-module-3-topic-b-overview) (1.2) |
| **6.NS.C.7b** Write, interpret, and explain statements of order for rational numbers in real-world contexts. | I can compare and order rational numbers in real-world contexts. | **Go Math Lesson:**  Lesson 3.3 Comparing and Ordering Rational Numbers (pg. 59)  **Engage NY Task:**  [Grade 6 Mathematics Module 3, Topic B](https://www.engageny.org/resource/grade-6-mathematics-module-3-topic-b-overview) (3.3) |
| **6.NS.C.7c** Understand absolute value of a rational number as its distance from 0 on the number line and distinguish comparisons of absolute value from statements about order in a real-world context. | I can determine the absolute value of a rational number. | **Go Math Lesson:**  Lesson 1.3 Absolute Value (pg. 19)  **Engage NY Task:**  [Grade 6 Mathematics Module 3, Topic B](https://www.engageny.org/resource/grade-6-mathematics-module-3-topic-b-overview) (1.3) |