Department: Math
Course Title: 7th Grade Math
Creator: M. Burns
Date: 2025-2026 School Year

Unit Title	Unit Length	Dates of Unit	Essential Questions	Texts Used	Skills to be Assessed	Standard Alignment	Formative Assessments	Summative Assessments
Proportions, Ratios, Circles	6 weeks	September to October	What is a scale factor? What is a scale drawing? How can we use a scale factor in the real world? What is a proportional relationship? How do we identify a proportional relationship? What does a proportional relationship look like on a graph? In a table? What are some proportional relationships we see in the real world? How are circumference and diameter related? How can we use the proportional relation between circumference and diameter to find an unknown measurement of a circle?	Work book	Understand that scale drawings are figures with side lengths in equivalent ratios. How to find and use scale factor to find an unknown length either in a scale drawing or in the object it represents. Apply the square of the scale factor to relate are in a scale drawing to the area of the object it represents. Use scale factors to redraw a scale drawing with a different scale. Find the unit rate associated with a ratio when one or both quantities in the ratio are fractions. Solve problems that involve a unit rate derived from a ratio where one or both quantities in the ratio are fractions. Understand that equivalent ratios have the same unit rate, representing a proportional relationship among the quantities. Understand that a proportional relationship is multiplicative, with equivalent ratios related by the constant of proportionality. Interpret proportional relationships represented in various ways. Identify the constant of proportionality in tables and diagrams. Understand that a proportional relationship can be represented as a straight line through the origin on a graph. Classify graphs as representing proportional or nonproportional relationships by visual inspection. Interpret verbal descriptions of problem situations. Use proportional relationship strategies and models to solve multi-step problems involving ratios. Derive formulas for circumference and rare of a circle. Use the formula for area of a circle to solve area problems.	CCSS.MATH.CONTENT.7.RP.A.1 Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. CCSS.MATH.CONTENT.7.RP.A.2 Recognize and represent proportional relationships between quantities. CCSS.MATH.CONTENT.7.G.A.1 Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale. CCSS.MATH.CONTENT.7.G.B.4 Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.	Homework (approx. 2 days a week) from each lesson of the unit, typically the independent practice pages or online. Quizzes on each lesson posted online or can be done on paper (3 versions in total)	Unit test includes multi-step problems, multiple choice, matching, and drop down.
Adding and subtracting integers	4	October - November	How are addition and subtraction related? How can we use horizontal or vertical number line to model addition and subtraction of rational numbers? What real-world situations involve rational numbers in our everyday life?	Work Book	Combining Like Terms Distributive Property	CCSS.MATH.CONTENT.7.EE.A.1 Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients. CCSS.MATH.CONTENT.7.EE.A.2 Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.	Homework (approx. 2 days a week) from each lesson of the unit, typically the independent practice pages or online. Quizzes on each lesson posted online or can be done on paper (3 versions in total)	Unit test includes multi-step problems, multiple choice, matching, and drop down.

Extending the properties of operations with negative numbers.	4	November - December	What happens when both terms are negative? What is one term is positive and the other is negative? Is there a pattern to signed numbers when multiplying or dividing? How can you re-write the fraction as a division problem? How can you write the division problem as a fraction?	Work Book	Extending the properties of operations with negative numbers can help you understand how to multiply, and divide signed numbers. You can divide an integer by any integer except 0, and the quotient is a rational number. Rational numbers have decimal forms that either terminate or repeat. You can write any division problem as a fraction, including problems with negative numbers.	CCSS.MATH.CONTENT.7.NS.A.2: Apply and extend previous understandings of multiplication. "CCSS.MATH.CONTENT.7.EE.A.1 Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients. CCSS.MATH.CONTENT.7.EE.A.2 Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. CCSS.MATH.CONTENT.7.EE.B.3 Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. CCSS.MATH.CONTENT.7.EE.B.4 Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities. "	Homework (approx. 2 days a week) from each lesson of the unit, typically the independent practice pages or online. Quizzes on each lesson posted online or can be done on paper (3 versions in total)	Unit test includes multi-step problems, multiple choice, matching, and drop down.
Distrbutive Property and Combining Like Terms		December - February	What are like terms and how do we combine them? What is the distributive property and how it is applied?	Supplemental Materials				

Expressions, Equations, and Inequalities	4	March - June	How can we use addition and subtraction to generate equivalent expressions? What does it mean to be equivalent? How do we evaluate expressions and equations with rational terms? What is a coefficient? What is a constant? How do we implement the order of operations when evaluating expressions and equations?	Supplemental Materials One-Step Two-Step Multi-Step	You can apply the properties of operations to generate equivalent expressions that reveal different aspects of a problem. You can use what you know above soling one-step equations to solve multi-step equations and inequalities. Reasoning about the effect of multiplying by a negative number can help you make sense of why the inequality symbol sometimes changes when you solve an inequality.	CCSS.MATH.CONTENT.7.EE.A.1 Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients. CCSS.MATH.CONTENT.7.EE.A.2 Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. CCSS.MATH.CONTENT.7.EE.B.3 Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. CCSS.MATH.CONTENT.7.EE.B.4 Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.	Homework (approx. 2 days a week) from each lesson of the unit, typically the independent practice pages or online. Quizzes on each lesson posted online or can be done on paper (3 versions in total)	Unit test includes multi-step problems, multiple choice, matching, and drop down.