Enduring Understandings	Essential Questions	Indicators
Exponential and scientific notation are efficient ways of expressing numbers.	What is the purpose of exponents?	6.7.1.1 recognize and appropriately use exponential, scientific, and calculator notation.
		6.7.2.1 describe the magnitude of numbers.
Integers have magnitude and direction.	How do operations with integers compare to operations with whole numbers?	6.7.2.2 determine the absolute value of rational numbers.
		6.7.5.1 model and explain the addition, subtraction, multiplication, and division of integers.
		6.7.5.2 add, subtract, multiply, and divide integers.
Algebraic representations generalize patterns and relationships.	Why are mathematical rules necessary?	1.7.3.4 apply formulas and evaluate algebraic expressions when given variable values.
		1.7.2.1 simplify expressions, using the order of operations, on expressions involving the four operations, exponents, and parentheses.
	Why use variables?	1.7.2.2 simplify expressions by applying the commutative, associative, and distributive properties and justify.
	Why are equations and inequalities useful?	1.7.3.1 use variables and appropriate operations to write expressions.
		1.7.3.2 model, identify, and solve 2-step linear equations and inequalities using concrete and informal methods.
		1.7.3.3 solve one- and two-step linear equations and inequalities in one variable.
		1.7.5.1 solve inequalities and graph the solutions on a number line.

Enduring Understandings	Essential Questions	Indicators
Exponential and scientific notation are efficient ways to operate with number.	Why use exponents?	6.8.5.4 model and apply the rules of exponents.
		6.8.5.5 multiply and divide by powers of ten.
Powers and roots are related.	How are roots and powers related?	6.8.5.2 describe the relationship between roots and powers.
		6.8.5.3 calculate powers and square roots of numbers.
		6.8.7.1 estimate powers and square roots to solve problems.
Real numbers are either rational or irrational.	What kinds of numbers make up the set of real numbers?	2.8.2.1 use the Pythagorean Theorem to solve problems by determining length of the missing side of a right triangle.
Patterns and relationships can be represented graphically, numerically, symbolically, and verbally.	Why are equations and inequalities useful?	1.8.2.1 combine like terms in variable expressions.
		1.8.3.1 solve linear equations and inequalities in one variable using mathematical properties.
Rational numbers are ratios of integers.	How do operations with rational numbers compare to operations with integers?	6.8.5.1 add, subtract, multiply, and divide with rational numbers.
Real numbers are either rational or irrational.	What kinds of numbers make up the set of real numbers?	6.8.7.3 select and apply mathematical properties to solve problems with real numbers.
Patterns and relationships can be represented graphically, numerically, symbolically, and verbally.	Why are equations and inequalities useful?	1.8.3.1 solve linear equations and inequalities in one variable using mathematical properties.