Unit 2 A – Exponents and Scientific Notation

Enduring Understanding

Exponential and scientific notation are efficient ways of expressing numbers.

Essential Questions

What is the purpose of exponents?

Indicators

6.7.1.1 recognize and appropriately use exponential, scientific, and calculator notation.
6.7.2.1 describe the magnitude of numbers.

Enduring Understanding	**Essential Questions**
Algebraic representations generalize patterns and relationships.	Why use variables? Why are mathematical rules necessary? Why are equations and inequalities useful?

Indicators

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.
1.7.2.2 simplify expressions by applying the commutative, associative, and distributive properties and justify.
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.

Enduring Understanding

Integers have magnitude and direction.
Algebraic representations generalize patterns and relationships.

Essential Questions

Why are mathematical rules necessary?
How do operations with integers compare to operations with whole numbers?

Indicators

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.

Enduring Understanding	**Essential Questions**
Algebraic representations generalize patterns and relationships.	Why are equations and inequalities useful?

Indicators

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.