

02 Equations

Content Area: **Mathematics**
Course(s):
Time Period: **Week1**
Length: **1 Week**
Status: **Published**

Stage 1: Desired Results

Unit Overview/ Rationale

Equations

Standards & Indicators

Common Core: Mathematics, Common Core: Grade 8, Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

MA.7.7.EE.B.4a

Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p , q , and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach.

MA.7.7.EE.A.1

Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.

MA.7.7.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.

MA.7.7.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.

Big Ideas - Students will understand that...

- Solve equations by adding, subtracting, multiplying, or dividing.
- Write and evaluate algebraic expressions.
- Solve word problems leading to one-step and two-step equations.

Essential Questions - What provocative questions will foster inquiry and transfer of learning

- How do you solve equations?
- How do you write an equation to match a situation?

Content - Students will know...

Key concepts:

Addition Property of Equality, Algebraic Expression, Coefficient, Distributive Property, Division Property of Equality, Inverse Operations, Like Terms, Multiplication Property of Equality, Subtraction Property of Equality, Variable.

Skills - Students will be able to...

- Learn how to gather data about a population.
- Use data from samples to make predictions and estimates about populations.

-Compare data about two populations using measures of center and measures of variability.

-Solve problems involving data sets.

Stage 2: Assessment Evidence

Assessment

Stage 3: Learning Plan

Learning Activities

Resources

Pearson

Algebra 1

c2012,

Chapter 2