Unit 2c-Solve Problems Using Equations and Inequalities

Content Area: **Math**
Course(s): **Math 7 PRE-ALGEBRA**
Time Period: **Marking Period 2**
Length: **MP2 WK8-10 1 Envision Mathematics Topic 5**
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Essential Questions

- How can you solve real-world and mathematical problems with numerical and algebraic equations and inequalities?

Big Ideas

- Use properties of operations to generate equivalent expressions.
- Solve real-life and mathematical problems using numerical and algebraic expressions and equations.
- Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations or inequalities to solve problems by reasoning about the quantities.

CSDT Technology Connection

8.1.8.DA.1: Organize and transform data collected using computational tools to make it usable for a specific purpose

Enduring Understandings

Expressions and Equations

7.EE.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.

7.EE.4a 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. 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.

7.EE.4b 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. Solve word problems leading to inequalities of the form px+q>r and px+q<r, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem.

Mathematical Practices Focus

1. Make sense of problems and persevere in solving them. Lesson 2,3,6, page 295
2. Reason abstractly and quantitatively. Lesson 1,3,4,6,7, page 295
3. Construct viable arguments and critique the reasoning of others. Lesson 3,5,7, page 295
4. Model with mathematics. Lesson 1,3,4,6,7, page 295
5. Use appropriate tools strategically. Page 295
6. Attend to precision. Lesson 4,5
7. Look for and make use of structure. Lesson 1,2,3,5,6,7
8. Look for and express regularity in repeated reasoning. Page 295