Algebra 1 (CCSP)

Section 2.2: Solving Inequalities by Adding or Subtracting

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Objectives**: Solve one-step inequalities by using addition.

Solve one-step inequalities by using subtraction.

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| **Main Idea** | **Notes** |
| **Exploration:** | 2.2 Exploration: Solving Inequalities by Adding or Subtracting |
| **Solving One-Step Inequalities** | Solving one-step inequalities is similar to solving \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.    To solve an inequality, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the variable using the properties of  inequality and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ operations. |
| **Addition and Subtraction Properties of Inequality:** | Write down the addition and subtraction properties of equality:  Addition:  If \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, then \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  If \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, then \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Subtraction:  If \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, then \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  If \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, then \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  The same is true for \_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |
| **Example 1: Solving Inequalities**  **Example 1 (Continued): Solving Inequalities** | Solve each inequality and graph its solution.  a) x + 9 < 15  **http://img.ehowcdn.com/article-new/ds-cdn-write/upload/6000/000/30/5/176035.jpg**  b) d – 5 ≥ -7  http://img.ehowcdn.com/article-new/ds-cdn-write/upload/6000/000/30/5/176035.jpg  c) 0.7 ≤ n – 0.4  **http://img.ehowcdn.com/article-new/ds-cdn-write/upload/6000/000/30/5/176035.jpg** |
| **Example 2: Solving Inequalities in the Real-World** | The memory in Tanya’s phone allows her to take up to 20 pictures. Tanya has already taken 16 pictures.  Write, solve, and graph an inequality to show how many more pictures Tanya can take. |
| **Example 3: Solving Inequalities in the Real-World** | Ms. Nugent wants to buy an antique bracelet at an auction. She is willing to bid no more than $550. So far, the highest bid is $475  Write and solve an inequality to determine the amount that Ms. Nugent can add to the bid. |
| **Exit Ticket:** | Explain how the Addition and Subtraction Properties of ***Inequality*** are like the Addition and Subtraction Properties of ***Equality***.  ( Do this on a separate piece of paper. I will collect this for a grade) |
| **Classwork:** | Worksheet: Solving Inequalities Using Addition and Subtraction |
| **Homework:** | Solve Inequalities Using Addition and Subtraction |