Algebra 1 (CCSP)

Section 2.1: Graphing and Writing Inequalities

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

**Objectives**: Students will be able to identity solutions of inequalities in one variable.

 Students will be able to write and graph inequalities in one variable.

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| **Main Idea** | **Notes** |
| **Exploration:** | 2.1 Exploration: Graphing and Writing Inequalities |
| **Vocabulary: Inequalities**  | An \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a statement that two quantities are not equal.The quantities are compared using one of the following:< \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_> \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_≤ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_≥ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ≠ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is any value that makes the inequality true. |
| **Example 1: Solutions of Inequalities** | Describe the solutions of x – 6 ≥ 4 in words. Let’s test some values. What values of x will work?x = -2x = 5x = 9x = 10 x = 11Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Graphing Inequalities:** | We can use a graph to show all of the solutions to the last example.Solution: All real numbers greater than or equal to 10.x ≥ 10 |
| **Graphing Inequalities:**  | Use an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ circle for < and >.Use a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ circle for ≤ and ≥.If it is less than, shade to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.If it is greater than, shade to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |
| **Example 2: Writing and Graphinhg Inequalities** | Write each inequality in words. Then Graph each inequality.1. m≥ ¾

 b) t < 5(-1 + 3) |
| **Example 3: Writing Inequalities from Graphs****Example 3 (Continued): Writing Inequalities from Graphs** | Write the inequality shown by the graph. |
| **Example 4: Real World Application** | The members of a crew team can weigh no more than 165 pounds each.1. Write an inequality for the acceptable weights of the team members.
2. Graph the solution.
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| **Exit Ticket:** | Explain the difference between x > 2 and x ≥ 2.Use as many examples as possible. ( Do this On a separate piece of paper. I will collect this for a grade) |
| **Classwork:**  | Graphing Inequalities Worksheet (Double Sided) |
| **Homework:** | 2.1 Additional Practice Worksheet |