Problem Set

1. Draw a number line and create a scale for the number line in order to plot the points -2, 4, and 6.

    a. Graph each point and its opposite on the number line.

    b. Explain how you found the opposite of each point.

2. Carlos uses a vertical number line to graph the points -4, -2, 3, and 4. He notices that -4 is closer to zero than -2. He is not sure about his diagram. Use what you know about a vertical number line to determine if Carlos made a mistake or not. Support your explanation with a number line diagram.

3. Create a scale in order to graph the numbers -12 through 12 on a number line. What does each tick mark represent?

4. Choose an integer between -5 and -10. Label it R on the number line created in Problem 3 and complete the following tasks.

    a. What is the opposite of R? Label it Q.

    b. State a positive integer greater than Q. Label it T.

    c. State a negative integer greater than R. Label it S.

    d. State a negative integer less than R. Label it U.

    e. State an integer between R and Q. Label it V.

5. Will the opposite of a positive number *always, sometimes,* or *never* be a positive number? Explain your reasoning.

6. Will the opposite of zero *always, sometimes,* or *never* be zero? Explain your reasoning.

7. Will the opposite of a number *always, sometimes, or never* be greater than the number itself? Explain your reasoning. Provide an example to support your reasoning.

COMMON CORE

Lesson 1: Positive and Negative Numbers on the Number Line—Opposite Direction and Value

Date: 8/10/14

engage^ny