

## Lesson 5: The Opposite of a Number's Opposite

### Classwork

#### Exercises

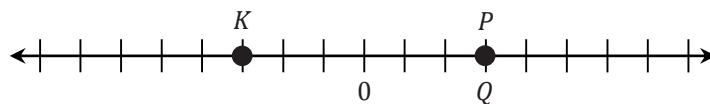
Get into groups of 2, grab a set of playing cards. Complete the table using the cards in your group.

Person	Card ( $a$ )	Opposite of Card ( $-a$ )	Opposite of Opposite of Card $-(-a)$

1. Write the opposite of the opposite of  $-10$  as an equation.
2. In general, the opposite of the opposite of a number is the \_\_\_\_\_.
3. Provide a real-world example of this rule. Show your work.

**Problem Set**

1. Read each description carefully, and write an equation that represents the description.
  - a. The opposite of negative seven
  - b. The opposite of the opposite of twenty-five
  - c. The opposite of fifteen
  - d. The opposite of negative thirty-six
  
2. Jose graphed the opposite of the opposite of 3 on the number line. First, he graphed point  $P$  on the number line 3 units to the right of zero. Next, he graphed the opposite of  $P$  on the number line 3 units to the left of zero and labeled it  $K$ . Finally, he graphed the opposite of  $K$  and labeled it  $Q$ .



- a. Is his diagram correct? Explain. If the diagram is not correct, explain his error, and correctly locate and label point  $Q$ .
- b. Write the relationship between the points:
 

$P$  and  $K$  \_\_\_\_\_

$K$  and  $Q$  \_\_\_\_\_

$P$  and  $Q$  \_\_\_\_\_
  
3. Read each real-world description. Write the integer that represents the opposite of the opposite. Show your work to support your answer.
  - a. A temperature rise of 15 degrees Fahrenheit
  - b. A gain of 55 yards
  - c. A loss of 10 pounds
  - d. A withdrawal of \$2,000
  
4. Write the integer that represents the statement. Locate and label each point on the number line below.
  - a. The opposite of a gain of 6
  - b. The opposite of a deposit of \$10
  - c. The opposite of the opposite of 0
  - d. The opposite of the opposite of 4
  - e. The opposite of the opposite of a loss of 5

