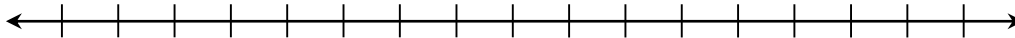


## Lesson 6: Rational Numbers on the Number Line

### Classwork

#### Exercise 1

Use what you know about the point  $-\frac{7}{4}$  and its opposite to graph both points on the number line below. The fraction  $-\frac{7}{4}$  is located between which two consecutive integers? Explain your reasoning.



On the number line, each segment will have an equal length of \_\_\_\_\_. The fraction is located between \_\_\_\_\_ and \_\_\_\_\_.

Explanation:

#### Exercise 2

Write a real world story problem using a rational number and its opposite. Create a horizontal or vertical number line to represent your situation. Describe what points zero and the opposite number represent on the number line. Give a rational number to the left and right of the rational number you originally chose.

My Story Problem

**Problem Set**

1. In the space provided, write the opposite of each number.

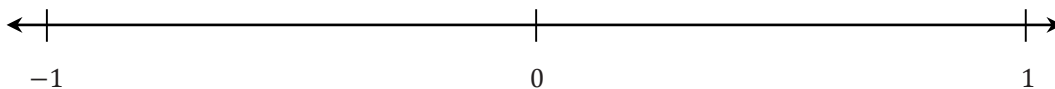
a.  $\frac{10}{7}$

b.  $-\frac{5}{3}$

c. 3.82

d.  $-6\frac{1}{2}$

2. Choose a non-integer between 0 and 1. Label it point *A* and its opposite point *B* on the number line. Write values below the points.



a. To draw a scale that would include both points, what could be the length of each segment?

b. In words, create a real-world situation that could represent the number line diagram.

3. Choose a value for point *P* that is between  $-6$  and  $-7$ .

a. What is the opposite of point *P*?

b. Use the value from part (a), and describe its location on the number line in relation to zero.

c. Find the opposite of the opposite of point *P*. Show your work, and explain your reasoning.

4. Locate and label each point on the number line. Use the diagram to answer the questions.

*Jill lives one block north of the pizza shop.*

*Janette's house is  $\frac{1}{3}$  block past Jill's house.*

*Jeffrey and Olivia are in the park  $\frac{4}{3}$  blocks south of the pizza shop.*

*Jenny's Jazzy Jewelry Shop is located halfway between the pizza shop and the park.*

a. Describe an appropriate scale to show all the points in this situation.

b. What number represents the location of Jenny's Jazzy Jewelry Shop? Explain your reasoning.

