

## Lesson 7: Addition and Subtraction of Rational Numbers

### Classwork

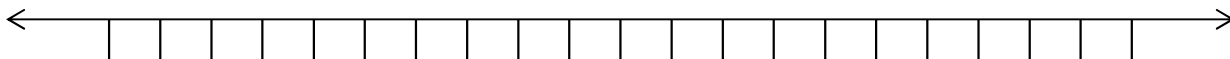
#### Exercise 1: Real-World Connection to Adding and Subtracting Rational Numbers

Suppose a seventh grader's birthday is today, and she is 12 years old. How old was she  $3\frac{1}{2}$  years ago? Write an equation, and use a number line to model your answer.

#### Example 1: Representing Sums of Rational Numbers on a Number Line

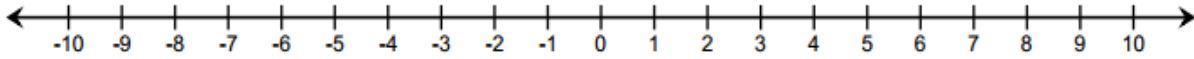
- Place the tail of the arrow on 12.
- The length of the arrow is the absolute value of  $-3\frac{1}{2}$ ,  $|-3\frac{1}{2}| = 3\frac{1}{2}$ .
- The direction of the arrow is to the *left* since you are adding a negative number to 12.

Draw the number line model in the space below.



**Exercise 2**

Find the following sum using a number line diagram:  $-2\frac{1}{2} + 5$ .



**Example 2: Representing Differences of Rational Numbers on a Number Line**

Find the following difference, and represent it on a number line:  $1 - 2\frac{1}{4}$ .

a.

Now follow the steps to represent the sum:

b.

c.

d.

Draw the number line model in the space below.

