

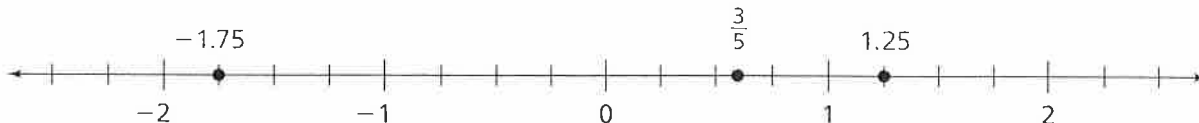


ONLY 5-14

A rational number can be expressed as a fraction in the form  $\frac{a}{b}$  or  $-\frac{a}{b}$ , where  $a$  and  $b$  are integers and  $b$  is not 0.

The number farthest to the left is the least number.

The number farthest to the right is the greatest number.



The numbers, in order from least to greatest, are:  $-1.75, \frac{3}{5}, 1.25$ .

## Do You Understand?

1. **Essential Question** How can you plot, compare, and order rational numbers using a number line?

2. **Generalize** Why are whole numbers rational numbers? Use 15 as an example. © MP.8

3. **Vocabulary** Why are integers rational numbers? Give an example.

4. **Reasoning** Explain how the inequality  $-4^\circ\text{C} > -9^\circ\text{C}$  describes how the temperatures are related. © MP.2

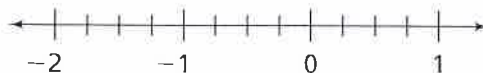
## Do You Know How?

In 5–7, write the number positioned at each point.



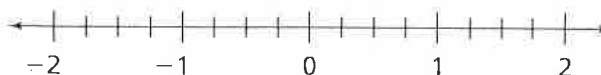
5. A                      6. B                      7. C

In 8–11, plot the points on the number line below.



8. P at  $-1\frac{1}{4}$                       9. Q at 0.25  
10. R at  $-0.75$                       11. S at  $-\frac{1}{4}$

In 12–14, use the number line to help order the numbers from least to greatest.



12.  $1.25, -\frac{3}{2}, -1.25, 1\frac{1}{2}$   
13.  $-0.5, \frac{1}{2}, -0.75, \frac{3}{4}$   
14.  $-1.5, -0.75, -1, 2$

25. **Reasoning** Suppose you plot the locations of the animals on a number line. Which animal would be represented by the point farthest from 0 on the number line? Explain. © MP.2

26. Which animal is closest to a depth of  $-0.7$  km?

27. The change in the value of a stock is represented by the rational number  $-5.90$ . Describe, in words, what this means.

29. **Make Sense and Persevere** Order  $-3.25$ ,  $-3\frac{1}{8}$ ,  $-3\frac{3}{4}$ , and  $-3.1$  from least to greatest. Explain. © MP.1

Animal	Possible Locations Relative to Ocean's Surface
Bloodbelly comb jelly	$-0.8$ km
Deep sea anglerfish	$-\frac{2}{3}$ km
Fanfin anglerfish	$-2\frac{1}{4}$ km
Gulper eel	$-1.1$ km
Pacific blackdragon	$-\frac{3}{10}$ km
Slender snipe eel	$-0.6$ km

28. **Construct Arguments** A classmate ordered these numbers from greatest to least. Is he correct? Construct an argument to justify your answer. © MP.3

4.4, 4.2,  $-4.42$ ,  $-4.24$

30. **Higher Order Thinking** Suppose  $\frac{a}{b}$ ,  $\frac{c}{d}$ , and  $\frac{e}{f}$  represent three rational numbers. If  $\frac{a}{b}$  is less than  $\frac{c}{d}$ , and  $\frac{c}{d}$  is less than  $\frac{e}{f}$ , compare  $\frac{a}{b}$  and  $\frac{e}{f}$ . Explain.

## © Assessment Practice

31. Which inequality is NOT true?

(A)  $4\frac{1}{2} > \frac{25}{4}$

(B)  $-4\frac{1}{2} > -\frac{25}{4}$

(C)  $-6 < -5$

(D)  $-\frac{1}{2} < \frac{1}{2}$

32. The numbers below are listed in order from greatest to least. Which could be a value for  $n$ ?

1.2, 0,  $n$ ,  $-\frac{1}{5}$

(A)  $-\frac{1}{2}$

(B)  $-\frac{1}{3}$

(C)  $-\frac{1}{4}$

(D)  $-\frac{1}{6}$

