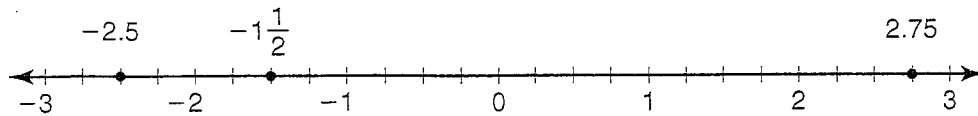


Understanding Rational Numbers

How would you graph $-1\frac{1}{2}$, 2.75, and -2.5 on the same number line?



-2.5 is the same as $-2\frac{1}{2}$.

2.75 is the same as $2\frac{3}{4}$.

When comparing and ordering rational numbers, it sometimes helps to change all of the numbers into fractions. Other times it is easier to change all of the numbers into decimals.

How do you compare rational numbers?

Compare $-2\frac{1}{4}$ and -1.75 .

-1.75 is the same as $-1\frac{3}{4}$. On a number line, $-2\frac{1}{4}$ is to the left of $-1\frac{3}{4}$. Therefore, $-2\frac{1}{4}$ is less than $-1\frac{3}{4}$.

So, $-2\frac{1}{4} < -1\frac{3}{4}$.

How do you order rational numbers?

Order $\frac{1}{4}$, 0.3, -0.27 from greatest to least.

You can rewrite $\frac{1}{4}$ as 0.25. You can also rewrite 0.3 as 0.30. Now it is easy to see that -0.27 is less than 0.25, and that 0.25 is less than 0.30.

So, the numbers in order from least to greatest are $-0.27, \frac{1}{4}, 0.30$.

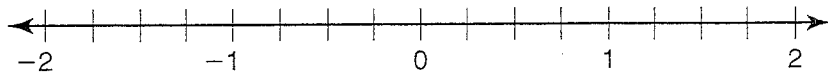
Graph each rational number on the number line.

1. -1.25

2. $1\frac{3}{4}$

3. $\frac{6}{8}$

4. $-\frac{3}{8}$



Use $>$ or $<$ to compare.

5. $-1\frac{1}{2}$ 1.75

6. -1.2 -1.1

7. $-1\frac{3}{4}$ $-\frac{3}{4}$

Order from least to greatest.

8. 0.15 0.63 -0.2 -0.35

9. $-\frac{1}{2}$ -1 $-\frac{1}{3}$ $\frac{1}{4}$

Understanding Rational Numbers

Graph each rational number on the same number line.

1. 1.5 2. $\frac{1}{2}$ 3. $\frac{2}{8}$ 4. -2.5 5. $-\frac{3}{4}$

Use $<$, $>$, or $=$ to compare.

6. $-0.2 \bigcirc -\frac{1}{4}$

7. $-2.5 \bigcirc -2\frac{1}{2}$

8. $-\frac{1}{2} \bigcirc -0.42$

Order from least to greatest.

9. $-\frac{6}{10}, \frac{4}{5}, \frac{7}{10}, 0.5, -\frac{4}{5}$ _____

10. -1.2, -5.3, 5.5, -1.5 _____

11. **Reasoning** Explain why $\frac{4}{5}$ is a rational number but is not an integer.

Test Prep

12. Which rational number is least?

- A. -0.2 B. $-\frac{9}{10}$ C. $-\frac{6}{7}$ D. -0.5

13. **Writing in Math** Explain what a *rational number* is in your own words.
