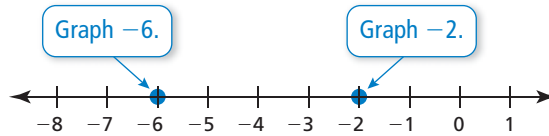


Comparing and Ordering Real Numbers

There are several ways to compare real numbers. One way is to write the numbers as decimals and use a number line.

Example 1 Complete the statement with $<$, $>$, or $=$.

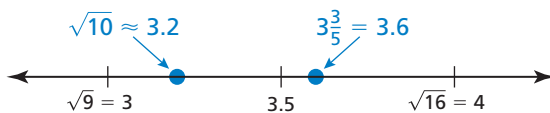
a. -2 -6



► -2 is to the right of -6 . So, $-2 > -6$.

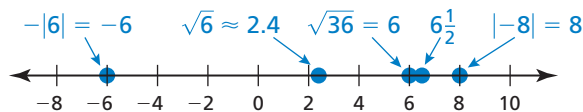
b. $\sqrt{10}$ $3\frac{3}{5}$

Estimate $\sqrt{10}$ to the nearest tenth. Then graph the numbers on a number line.



► $3\frac{3}{5}$ is to the right of $\sqrt{10}$. So, $\sqrt{10} < 3\frac{3}{5}$.

Example 2 Order the values from least to greatest: $\sqrt{36}$, $|-8|$, $\sqrt{6}$, $6\frac{1}{2}$, $-|6|$.



► So, the order from least to greatest is $-|6|$, $\sqrt{6}$, $\sqrt{36}$, $6\frac{1}{2}$, and $|-8|$.

Practice

Check your answers at BigIdeasMath.com.

Complete the statement with $<$, $>$, or $=$.

1. -4 -1

2. 0 -10

3. -12 $|-13|$

4. 7 $|-7|$

5. $\sqrt{14}$ 3.75

6. $2\frac{1}{4}$ $2.\bar{3}$

7. $-\sqrt{15}$ -4

8. π $3\frac{1}{10}$

Order the values from least to greatest.

9. 3 , $-|-2|$, $|-2|$, $|0|$, -1

10. -12 , $-|14|$, 10 , $|-15|$, -9

11. π , 3.14 , $\sqrt{7}$, $2\frac{3}{4}$, $\sqrt{4}$

12. 2π , $5.1\bar{6}$, $5\frac{1}{8}$, $\sqrt{25}$, 5.25

13. $-|-1|$, 0.11 , 0 , $-|11|$, 1.1 , $|-1|$

14. $|-4^3|$, $|-9 \cdot 7|$, 60 , $\sqrt{64}$