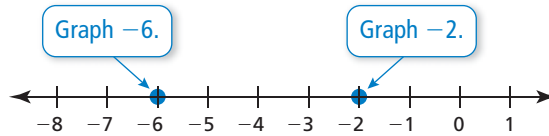


Comparing and Ordering Real Numbers

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 $=$.

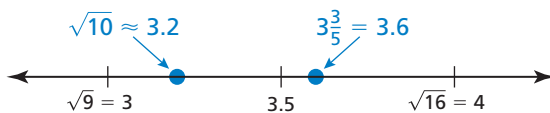
a. -2 -6



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

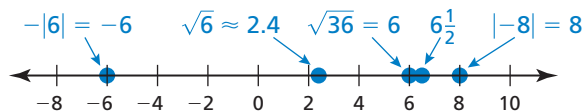
b. $\sqrt{10}$ $3\frac{3}{5}$

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. $\pi, 3.14, \sqrt{7}, 2\frac{3}{4}, \sqrt{4}$
 $-|-2|, -1, |0|, |-2|, 3$ $-|14|, -12, -9, 10, |-15|$ $\sqrt{4}, \sqrt{7}, 2\frac{3}{4}, 3.14, \pi$
 12. $2\pi, 5.1\bar{6}, 5\frac{1}{8}, \sqrt{25}, 5.25$ 13. $-|-1|, 0.11, 0, -|11|, 1.1, |-1|$ 14. $|-4^3|, |-9 \cdot 7|, 60, \sqrt{64}$
 $\sqrt{25}, 5\frac{1}{8}, 5.1\bar{6}, 5.25, 2\pi$ $-|11|, -|-1|, 0, 0.11, |-1|, 1.1$ $\sqrt{64}, 60, |-9 \cdot 7|, |-4^3|$