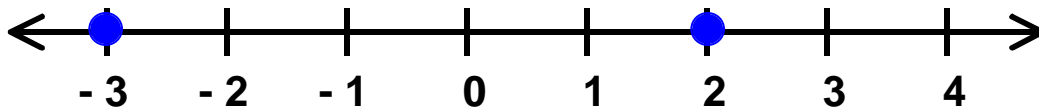


Comparing and Ordering Integers

Recall that on a number line, the numbers increase as you move further to the right.

-3 and 2 are graphed on the number line below.



Say: 2 is greater than -3

The number to the right on the number line is always greater.

Write: $2 > -3$

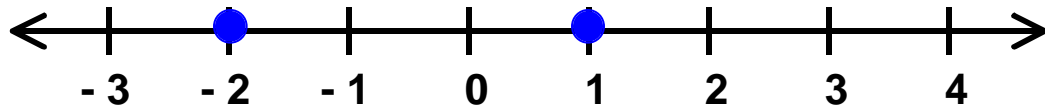
You could also conclude that -3 is to the left of 2 .

Say: -3 is less than 2

Remember, the symbol points to the lesser number.

Write: $-3 < 2$

Example 1: Use the integers graphed on the number line below for each question.



- a. Write two inequalities with -2 and 1 .

Since -2 is to the left of 1 , write $-2 < 1$.

Since 1 is to the right of -2 , write $1 > -2$.

- b. State which number is greater.

1 is greater since it lies to the right of -2 .

- c. State which number has a greater absolute value.

The absolute value of -2 is greater than the absolute value of 1 because -2 lies farther from the origin.

Example 2: Order the integers in each set from least to greatest.

a. $\{-11, 8, -3\}$

$$\{-11, -3, 8\}$$

b. $\{-6, 56, 29, 1, -65\}$

$$\{-65, -6, 1, 29, 56\}$$

Example 3:

Write an inequality using the numbers in each sentence. Use $<$ and $>$ symbols.

a. 3 m is taller than 2 m

$$3 > 2$$

b. 60 kph is slower than 75 kph

$$60 < 75$$

c. Yesterday's high temperature was 41° F. The low temperature was -3° F.

$$41 > -3$$