Get Ready

Name: _____ Date: _____

BLM 9–2

Use Symbols to Describe Relationships

Mathematicians use symbols for operations and to show relationships between quantities. For example,

× represents multiplication
÷ represents division
< represents is less than
> represents is greater than
= represents is equal to
≠ represents is *not* equal to

1. Translate each word statement into symbols.

a) 5 is greater than 2.

b) 7 is less than 20.

c) 5 multiplied by 3.

d) 9 is equal to $\frac{18}{2}$.

2. Write each mathematical statement in words.

a) $4 < 8$

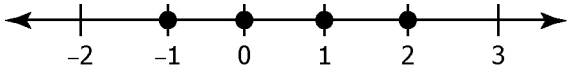
b) $8 > 2$

c) $14 \div 2$

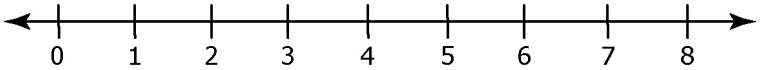
d) $4 \neq \frac{8}{3}$

Use *Between*

The term *between* can be used to describe a physical relationship or location. For example, Paul is *between* Sue and Shasta in line. Similarly, *between* can be used in mathematics. For example, all of the integers between –2 and 3 are –1, 0, 1 and 2
Note that *between* does not include –2 and 3.



3. List all of the whole numbers satisfying each condition. Use the number line to help you.



a) between 6 and 3

b) between –2 and 2

c) between 4.6 and 7.1

d) less than 4

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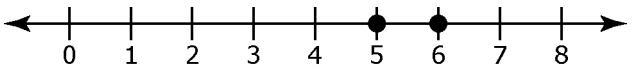
Use Inequality Symbols

An *inequality* expresses a relationship between numbers or quantities. Two inequality symbols are < and >.



The inequality 5 < 6 means 5 is less than 6. This same information can be shown as 6 > 5, which means 6 is greater than 5.

4. Write two expressions showing the relationship between the given numbers. Use both the less than, <, and greater than, >, symbols.

a) 1 and 7

b) 4 and –1

c) 3 and 3.5

d) 0 and 1

5. List the whole numbers that satisfy each statement.

a) $x < 4$

b) between 4 and 8

c) $t > 11$

d) $a < 15$

Solve Equalities

When you solve an equation, you need to find all values for the unknown that make a true statement.

Solve: $2x - 1 = 7$.

Solution:

$2x - 1 + 1 = 7 + 1$

$2x = 8$

$x = 4$

Check:

$2(4) - 1 = 7$

$8 - 1 = 7$

$7 = 7$

6. Solve each equation. Then, verify your answer.

a) $x + 4 = 6$

b) $-2x + 1 = 9$

c) $-5x - 3 = -8$

d) $3x - 5 = 4$