

## Inequalities

We use the symbol  $=$  to represent equality.

To express inequalities, we have the following symbols:

$>$  greater than

$<$  less than

$\geq$  greater than or equal to

$\leq$  less than or equal to

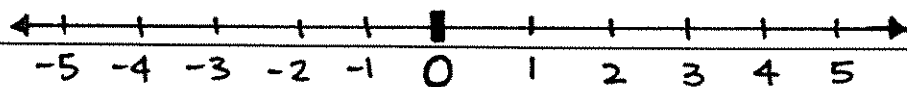
$\neq$  not equal to

example 1: True or false?

$$-3 < -4$$

the symbol  $<$  means less than.

Looking at the number line,  $<$  means "to the left of"



So,  $-3 < -4$  means  $-3$  is to the left of  $-4$  on the number line.

Therefore this statement is false.

consider  $x > 4$

this means  $x$  is to the right  
of 4 on the number line.

can  $x$  be 5?

can  $x$  be 3?

can  $x$  be 4?

example 2: TRUE OR FALSE?

$$85 \geq 2[3 + 5(6 + 2)]$$

↳

$$2[3 + 5(\underline{\quad})]$$

$$2[3 + \underline{\quad}]$$

$$2(\quad)$$

↳

ANSWER:

Note: For example 2, we must follow the  
Order of Operations.

## INEQUALITIES    practice Problems

1. True OR False ?

a)  $5 > 7$

b)  $9 < 11$

c)  $-4 \leq -5$

d)  $-11 > -10$

2. True OR False ?

$6 [2^3 - 7] + 15 \geq 21$