Introduction to Inequalities

Name _____

Date _____ Period _____

An equation is a mathematical statement that two expressions are equal

$$x + 7 = 12$$

the left expressions is equal to the right expression

$$n - 2 = 6 \qquad \text{-}4 = 2k + 8$$

An inequality is a mathematical comparison of two expressions

4 inequality signs

$$> \qquad\qquad \geq \qquad\qquad < \qquad\qquad \leq$$

$$x + 7 > 12$$

the left expressions is greater than the right expression

An inequality is a mathematical comparison of two expressions

4 inequality signs

$$> \qquad \geq \qquad < \qquad \leq$$

$$x + 7 < 12$$

the left expressions is less than the right expression

Sign	Meaning	Associated Words and Language
=	is equal to	
>	is greater than	
≥	is greater than or equal to	
<	is less than	
≤	is less than or equal to	

Write an equation or inequality from the following statements

a number plus three is the same as ten

five times a number is at least twenty

thirteen is fewer than a number minus two

Write an equation or inequality from the following statements

a number plus six is at most nine

two times a number is more than four

twelve is equivalent to a number minus six

A solution of an equation or inequality is a number that creates a true statement

$$x + 6 = 9$$

Is 3 a solution?   Is 8 a solution?

A solution of an equation or inequality is a number that creates a true statement

$$x + 6 > 9$$

Is 3 a solution?   Is 8 a solution?

A solution of an equation or inequality is a number that creates a true statement

$$x + 6 \leq 9$$

Is 3 a solution?   Is 8 a solution?

An equation is a mathematical statement that two expressions are equal

$$x + 7 = 12$$

An inequality is a mathematical comparison of two expressions

4 inequality signs

$x + 7 > 12$	$x + 7 \geq 12$	$x + 7 < 12$	$x + 7 \leq 12$
$>$	$\geq$	$<$	$\leq$
"greater than"	"greater than or equal to"	"less than"	"less than or equal to"

A solution of an equation or inequality is a number that creates a true statement