Solving Inequalities

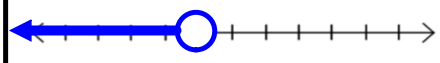
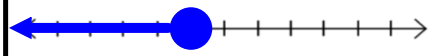
1. Solve for x like a regular equation.

2. If you multiply or divide by a negative, switch the direction of the inequality.

3. It is easier to read inequalities if x is on the left side.

$x <$ some number and some number $> x$

MEAN THE SAME THING!

	Smaller	Larger
Open dot "No touch"	x < some number "x is less than some number" 	x > some number "x is greater than some number" 
Closed dot "Touches"	x ≤ some number "x is less than or equal to some number" 	x ≥ some number "x is greater than or equal to some number" 

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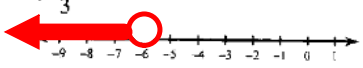
Name _____

Solving Two-Step Inequalities

Date _____ Period ____

Solve each inequality and graph its solution.

1) $\frac{n}{3} + 2 > 0$

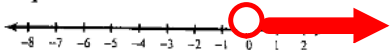


$n > -6$

2) $\frac{p}{9} - 1 \leq -2$

$p \leq -9$

3) $\frac{x}{1} + 5 > 5$

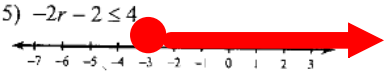


$x > 0$

4) $\frac{1+m}{9} \geq 1$

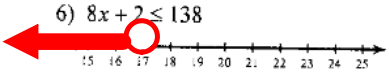
$m \geq 8$

5) $-2r - 2 \leq 4$



$r \geq -3$

6) $8x + 2 \leq 138$



$x \leq 17$

7) $3 + \frac{b}{9} < 4$

$b < 9$

8) $9 + \frac{n}{2} > 16$

$n > 14$