

NAME: KEY

PER: \_\_\_\_\_

## SOLVING INEQUALITIES

(Station)

### NOTES:

Write the steps for solving inequalities.

Solve just like equations. Just watch out for negatives.

What must you look out for when solving inequalities? Why?

Negatives: dividing/multiply must flip inequality sign.

When **graphing inequalities** what does each sign do?

(ABOVE, BELOW, DASHED, SOLID)

$<$  : Dashed, Below       $\leq$  : Solid, Below

$>$  : Dashed, Above       $\geq$  : Solid, Above

### PRACTICE:

#### SOLVE THE FOLLOWING INEQUALITIES

1.  $28 - 7x \leq -4(-7x - 7)$

$$\begin{aligned} \cancel{28} - 7x &\leq \cancel{28}x + \cancel{28} \\ -\cancel{28} - \cancel{28}x &\quad -\cancel{28}x \quad -\cancel{28} \\ -35x &\leq 0 \\ \frac{-35x}{-35} &\quad \frac{0}{-35} \end{aligned}$$

$x \geq 0$

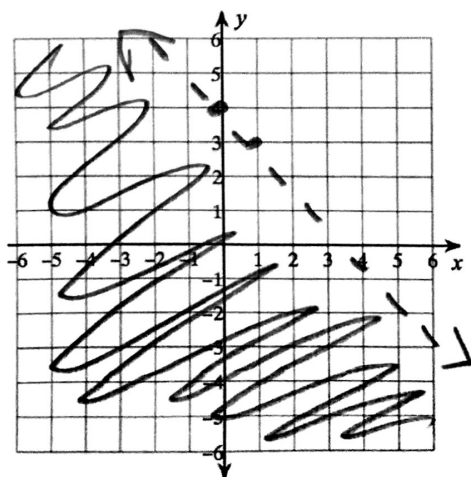
2.  $3(1 - 2x) > 3 - 6x$

$$\begin{aligned} 3 - 6x &> 3 - 6x \\ +6x &\quad +6x \\ 3 &> 3 \end{aligned}$$

True  
Inf. Many

#### GRAPH THE FOLLOWING LINEAR INEQUALITIES

3.  $y < -x + 4$



4.  $3x + y \leq 2$

$y \leq -3x + 2$

