

Name: \_\_\_\_\_

## Solving & Graphing Inequalities

Solve each inequality and graph the solution.

3)  $\frac{6x}{6} < \frac{30}{6}$   
 $x < 5$

4)  $x + 9 \geq 11$   
 $\frac{-9}{-9} \frac{-9}{-9}$   
 $x \geq 2$

5)  $9 + 3x > 12$   
 $\frac{-9}{-9} \frac{-9}{-9}$   
 $\frac{3x}{3} > \frac{3}{3}$   
 $x > 1$

6)  $3x - 4 \leq 5$   
 $\frac{+4}{+4} \frac{+4}{+4}$   
 $\frac{3x}{3} \leq \frac{9}{3}$   
 $x \leq 3$

1)  $\frac{-10 + 8x > 2}{-10 \quad -10}$       $\frac{8x}{8} > \frac{-8}{8}$   
 $\frac{8x}{8} > \frac{-8}{8}$   
 $x > -1$

a)

b)

c)

d)

4)  $\frac{7x - 2 < 19}{+2 \quad +2}$       $\frac{7x}{7} < \frac{21}{7}$       $x < 3$

a)

b)

c)

d)

7)

a)  ~~$\frac{x}{5} < 4$~~

b)  $\frac{x}{5} \geq 4 \cdot 5$   
 $x \geq 20$

c)  ~~$\frac{x}{5} > 4$~~

d)  ~~$\frac{x}{5} \leq 4$~~

8)

a)  ~~$x - 2 \leq 8$~~

b)  ~~$x - 2 > 8$~~

c)  ~~$x - 2 \geq 8$~~

d)  $x - 2 < 8$   
 $\frac{+2}{+2} \frac{+2}{+2}$   
 $x < 10$