

# 6 - 4

## Solving Compound Inequalities

**Ex: Graph the solution set of  
 $x < 3$  and  $x \geq -2$**



Ex: Solve  $-5 < x - 4 < 2$ . Then graph.

$$\begin{array}{rcl} x - 4 & < & 2 \\ +4 & & +4 \end{array}$$

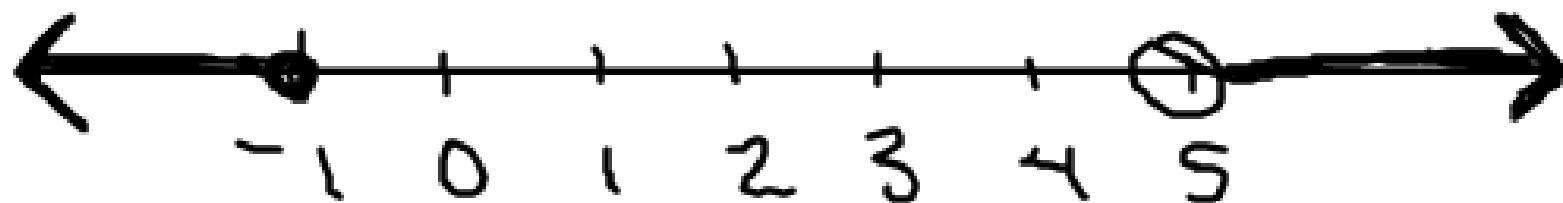
$$x < 6$$

$$\begin{array}{rcl} x - 4 & > & -5 \\ +4 & & +4 \end{array}$$

$$x > -1$$



**Ex: Graph the solution set of  
 $x \leq -1$  or  $x > 5$**



Ex: Solve  $-3h + 4 < 19$  or  $7h - 3 > 18$ .  
Then graph.

$$\begin{aligned} -3h + 4 &< 19 \\ \cancel{-4} &\quad \cancel{-4} \end{aligned}$$

$$\begin{aligned} \cancel{-3h} &< \frac{15}{\cancel{-3}} \\ \cancel{-3} & \end{aligned}$$

$$h > -5$$

$$\begin{aligned} 7h - 3 &> 18 \\ \cancel{+3} &\quad \cancel{+3} \end{aligned}$$

$$\begin{aligned} 7h &> 21 \\ \cancel{7} & \end{aligned}$$

$$h > 3$$





Homework:

p. 342 #14 - 25