

# Warm-up

Solve & graph

$$\textcircled{1} \quad 8 > x + 10$$

-10                  -10

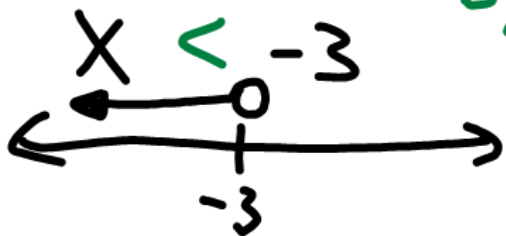
$$-2 > x$$



$$\textcircled{3} \quad -3x + 1 > 10$$

-1                  -1

$$\frac{-3x}{-3} > \frac{9}{-3}$$



Switch  
Sign

$$\textcircled{2} \quad -6 \leq 2x - 4$$

+4                  +4

$$\frac{-2}{2} \leq \frac{2x}{2}$$

$$-1 \leq x \rightsquigarrow x \geq -1$$



## 6.4 Compound Inequalities

I went to class and I finished my work.  
 We'll go to Fargo or we'll go to DQ.

\* Compound sentences - contain and/or  
 & puts 2 or more sentences together.

**AND** → Must do both

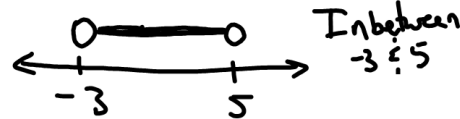
**OR** → Do one or the other

AND

$$-3 < x < 5$$

\* x smaller than 5

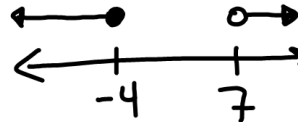
& bigger than -3



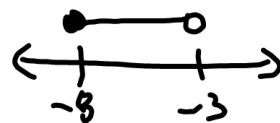
OR

$$x \leq -4 \text{ or } x > 7$$

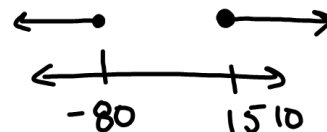
\* Graph both



Write the inequality for



$$-8 \leq x < -3$$



$$x \leq -80 \text{ or } x \geq 1510$$

Solve.

$$6 < x - 2 < 13$$

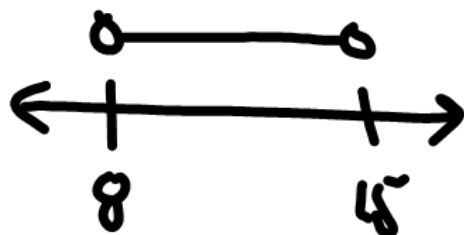
+2

+2

+2

$$8 < x < 15$$

☺



\* Break into 3 zones.

\* What you do to one, you do to all