

Name: \_\_\_\_\_  
Date: \_\_\_\_\_  
Class: \_\_\_\_\_

Algebra  
Unit 2  
HW 2-8

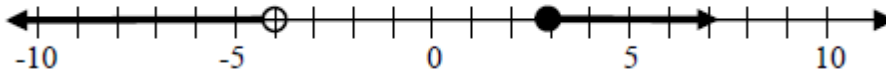
1) Is the following inequality true or false when  $x = 2$ ?

$$\frac{2(x+1)}{3} \leq 6 \text{ and } -2(3-2x) < 2$$

2) Is the following inequality true or false when  $x = -1$ ?

$$3x + 7 < -11 \text{ or } 4 - 2x \leq 18$$

3) Write a compound inequality that would be represented by this graph:



4) Solve and graph the following:

$$-7 \leq 2x - 5 < 7$$

5) Solve and graph the following:

$$\frac{1}{2}(x+4) < 5 \text{ or } -2(x-4) \leq 14$$

6) Bernard is two less than twice as old as Jerry. Mark is 19 years older than Bernard. When you add all 3 of their ages together you get an answer that is 6 less than 3 times as old as Bernard. How old is Jerry?

7) Simplify:  $x^2(2x - 5) - (6x - 2x^2) + 4x - 9(x^3 + 6x)$