Review Homework 2

1) Which of the following can be modeled by y= 2x + 5? ***CIRCLE ALL THAT APPLY!***

     A. There are initially 5 rabbits on a farm. Each month thereafter the number of rabbits is 2 times the number in the month before.

     B. Joseph earns $2.00 for each magazine sale. Each time he sells a magazine he gets a $5 tip. How much money will he earn after selling x magazines?

     C. Sandy charges $2.00 an hour for babysitting. Parents are charged $5.00 if they are home later than scheduled. Assuming the parents arrived late, how much money did she earn for x hours?

     D. For a gym membership there is a $2.00 initiation fee for joining the gym and a $5.00 per class charge. How much would Ms. Martin owe for joining the gym and taking x classes?

     E. Andy is saving money for a new CD player. He began saving with a$5.00 gift and will continue to save $2.00 each week. How much money will he have saved at the end of x weeks?

2) A local restaurant will deliver food to your house if the purchase amount of your order is at least $25. The total for part of your order is $18. Write and solve an inequality to determine how much more you must spend for the restaurant to deliver your order.

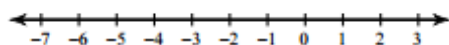3) $8x - 2 = -9 + 7x$

4) $a + 5 = -5a + 5$
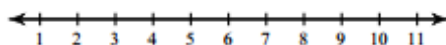
5) $4m - 4 = 4m$

6) $p - 1 = 5p + 3p - 8$

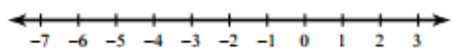7) $5p - 14 = 8p + 4$

8) $p - 4 = -9 + p$

9) $167 < 6 + 7(2 - 7r)$

$$\xleftrightarrow[\quad -7 \quad -6 \quad -5 \quad -4 \quad -3 \quad -2 \quad -1 \quad 0 \quad 1 \quad 2 \quad 3 \quad]{}$$

10) $5(6 + 3r) + 7 \geq 127$

$$\xleftrightarrow[\quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \quad 9 \quad 10 \quad 11 \quad]{}$$

11) $-8x + 2x - 16 < -5x + 7x$

$$\xleftrightarrow[\quad -7 \quad -6 \quad -5 \quad -4 \quad -3 \quad -2 \quad -1 \quad 0 \quad 1 \quad 2 \quad 3 \quad]{}$$

12) $-1 - 6x - 6 > -11 - 7x$

$$\xleftrightarrow[\quad -8 \quad -7 \quad -6 \quad -5 \quad -4 \quad -3 \quad -2 \quad -1 \quad 0 \quad 1 \quad 2 \quad]{}$$
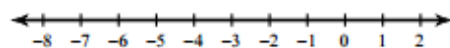
CHALLENGE:

Solve for x.

$$\frac{1}{5}(2x - 10) + 4x = -3\left(\frac{1}{5}x + 4\right)$$