Name _____

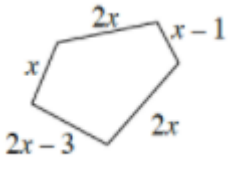
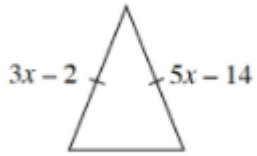
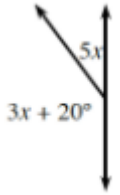
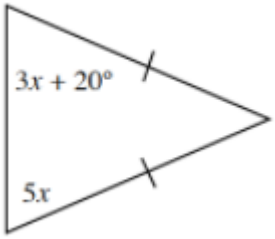
Period _____ Date _____

Homework 5.1.1

1) Solve the following equations

a) $2x - 10 = 0$	b) $x + 9 = 0$	c) $(2x - 10)(x + 9) = 0$

2) For each diagram below, set up an equation and solve for x

a) Perimeter = 76 units 	b) 
c) 	d) 

3) What values of *x* will make the following equations true?

a. $x^2 = 16$

b. $x = \sqrt{16}$

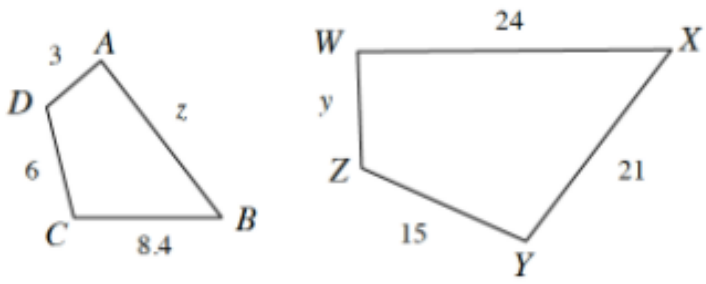
c. $|x| = 4$

d. $x + 3 = \sqrt{16}$

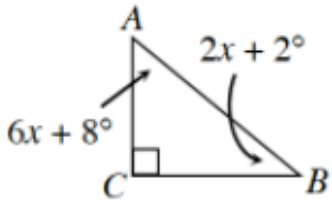
e. $x^2 = -16$

f. $x^2 + 4 = 0$

4) Given that $ABCD \sim WXYZ$, solve for y and z.



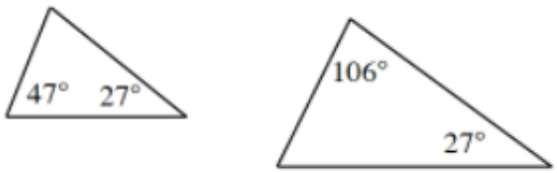
5) Determine the measures of ∠ABC and ∠BAC by writing and solving an equation.



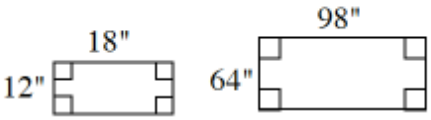
What is true about the sum of these two angles?

6) Examine each pair of polygons below. Are they similar? Explain how you know.

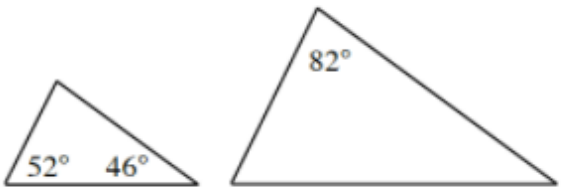
a.



b.



c.

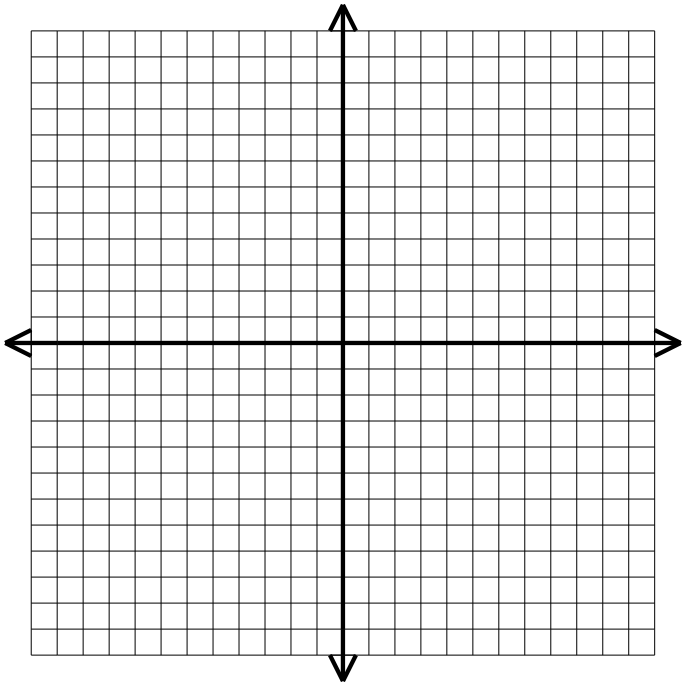


7) Graph the three equations on the same set of axes below.

Line #1: $y = \frac{3}{4}x + 6$

Line #2: $y = \frac{3}{4}x + 2$

Line #3: $y = -\frac{4}{3}x + 4$



What do you notice about the relationship between:
Line #1 and Line #2?

Line #2 and Line #3?

Line #1 and Line #3?

8) Examine the tile pattern below. Based on the information provided for figures 1 – 4, answer the following:

a) Make a table to represent the number of tiles (squares) for the figures

b) How many tiles would there be in figure 5? Explain how you know.

c) (Challenge) Try to write an equation for the relationship between the figure number and the number of tiles.

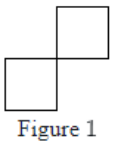


Figure 1

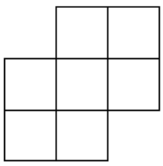


Figure 2

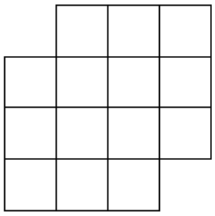


Figure 3

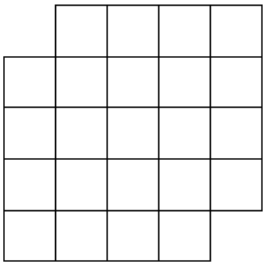


Figure 4