Pre-Algebra Problem Set 9 **First Name**_____ **Last**_____

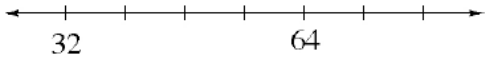
Assigned Wednesday 11/6, due Friday 11/15

NO Work Shown, NO Credit Given

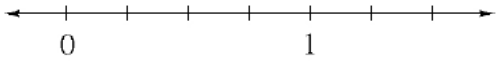
Problems #1-5 can be completed on this paper. The work for problems #6-10 needs to be attached on a *separate piece of paper*.

1. Complete the scaling for each number line or set of axes.

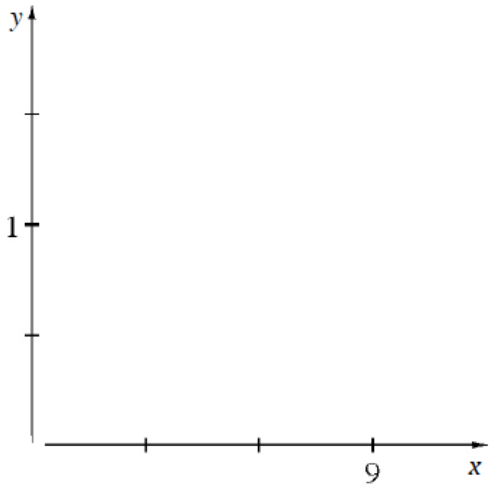
a)



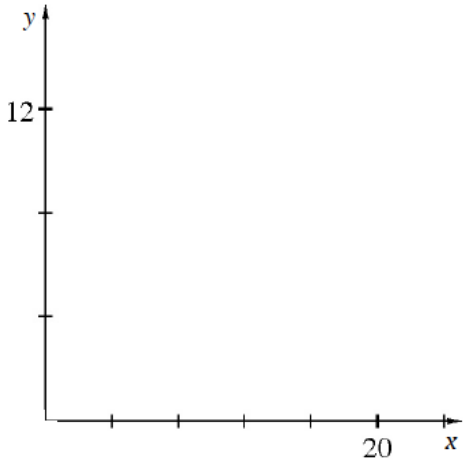
b)



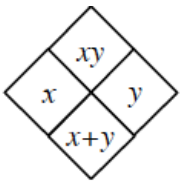
c)



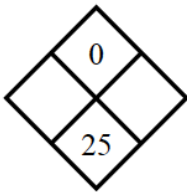
d)



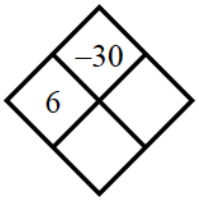
2. Complete each of the Diamond Problems below. The pattern used in the Diamond Problems is shown at right.



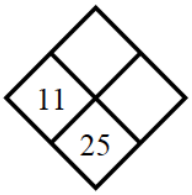
a)



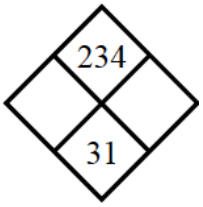
b)



c)



d)



3. For each of the experimental results described, write the indicated probability.

a) A coin is flipped 80 times. It lands tails 47 times. Write P(heads) as a fraction.

b) A bag contains purple and orange marbles. Sam randomly takes out one marble and then returns it to the bag. He does this 18 times, and 12 of those times an orange marble is pulled out. Write P(orange) as a decimal.

c) Sarah pulls a card from a standard deck and then replaces it. She does this 30 times, and 40% of the time it is hearts. Write P(*not* hearts) as a percent.

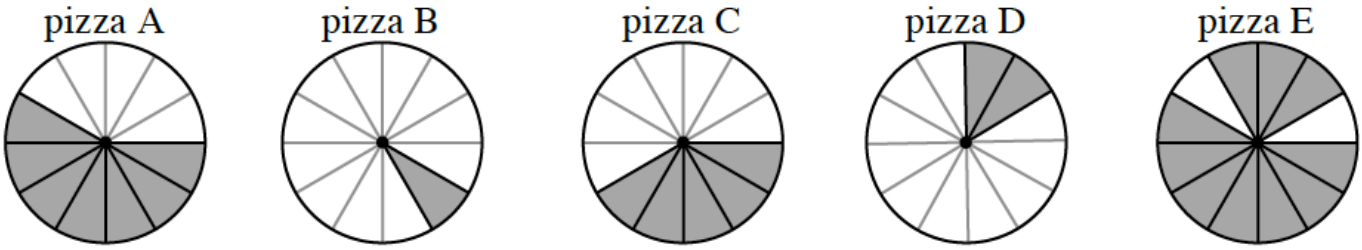
4. a) $2(-5)+3$ **b)** $-2(-5+3)$ **c)** $-3+2(-5)$

5. Draw a portion web for each number.

a) 325% **b)** $\frac{1}{8}$ **c)** 5% **d)** $\frac{7}{20}$ **e)** 0.111 **f)** $0.\overline{111}$

---------- **Please show work for #6-10 on separate piece of paper.** ----------

6. After a pizza party, Julia has parts of five pizzas left over, as shown below. Each pizza was originally cut into 12 pieces, and the shaded areas represent the slices that were not eaten.



a) What fraction of pizza A is left?

b) If all of the pieces were put together, how many whole pizzas could Julia make? How many extra pieces would she have?

c) Julia wants to write the amount of leftover pizza as a single fraction. How could she do this?

7. Frieda Friendly works for a local car dealership. She noticed that $\frac{3}{4}$ of the cars are sedans and that half of them are white. What fraction of the dealership's cars are white sedans?

a) Draw a *portion diagram* in a rectangle to represent this situation. Label the parts carefully.

b) Write an equation or a sentence that describes the situation, and answer the question.

c) Write your answer from part (b) as a decimal and as a percent.

8. a) What is $\frac{2}{3}$ of $\frac{2}{5}$? **b)** What is $\frac{2}{5}$ of $\frac{2}{3}$?

c) Are the answers above the same? *Why or why not?*

9. Use the Distributive Property to *rewrite* each of the following products as sums, and then calculate the value, as shown in the example below.

Example: 4(307) = 4(300) + 4(7) = 1200 + 28 = 1228

a) 9(605) **b)** 4(582) **c)** 5(6230)

10. Simplify each expression below. *Show your work.*

a) $7\frac{5}{8} + 2\frac{9}{16}$ **b)** $6\frac{1}{6} - 2\frac{7}{8}$ **c)** $8 - 6\frac{2}{7}$ **d)** $-2\frac{1}{2} + 5\frac{1}{3}$

e) $\frac{3}{28} \cdot \frac{4}{15}$ **f)** $\frac{4}{9} \cdot \frac{15}{16}$ **g)** $\frac{2}{5} \cdot \frac{3}{4} \cdot \frac{5}{6}$ **h)** $\frac{3}{4} \cdot 20$