Math Concepts Problem Set 10   Name_____

Assigned Thursday 11/14, due Friday 11/22

No Work Shown, No Credit Given   Period_____

Problems #1-#5 can be completed on this paper. The work for #6-#14 needs to be attached on *a separate piece of paper*.

1. Complete each Giant One problem.

a) $\frac{9}{20} \cdot \boxed{\frac{}{}} = \frac{}{100}$

b) $\frac{3}{4} \cdot \boxed{\frac{}{}} = \frac{}{44}$

c) $\frac{5}{3} \cdot \boxed{\frac{}{}} = \frac{}{18}$

2. For each of the following problems, complete the fraction on the right so that the fractions are equal. Be sure to show your Giant Ones clearly.
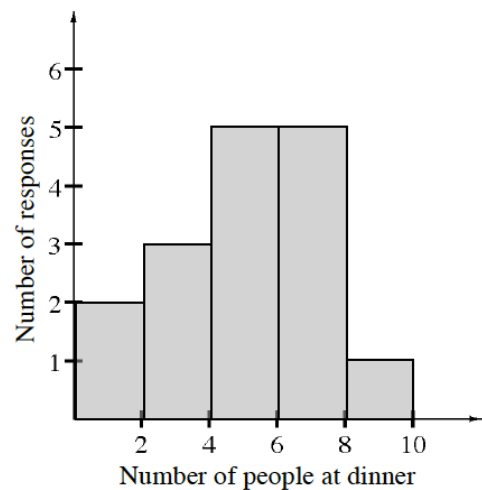
a) $\frac{3}{8} \cdot \boxed{} = \frac{}{32}$

b) $\frac{7}{10} \cdot \boxed{} = \frac{}{100}$

c) $\frac{1}{2} \cdot \boxed{} = \frac{}{250}$

3. Lyn asked some of her classmates how many people are normally at home for dinner. She recorded her results in the histogram.
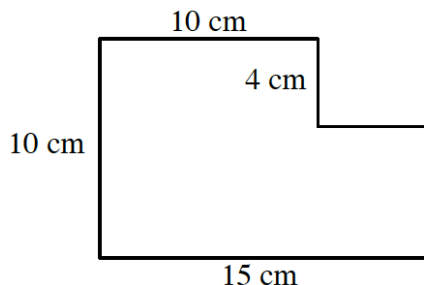**a)** How many classmates were surveyed?

b) How many classmates have eight or nine people at home for dinner?

c) Can you tell which is the most common number of people at home for dinner? Why or why not?

4. Find the area of the compound rectangle.

10 cm

4 cm

10 cm

15 cm

5. a) List four fractions equivalent to $\frac{4}{5}$.   **b)** List four fractions equivalent to $\frac{3}{8}$.

6. Add or subtract the following decimals. *Show your work.*

a) $2.95 + 18.3 + 11$ **b)** $9.2 - 0.375$ **c)** $0.275 + 27.5$ **d)** $90 - 0.903$

7. Each problem below has an error in the answer. Find the error, and **show** how to find the correct answer. *Show your work.*

a)
$$467.92$$
$$+ 1.293$$
$$\overline{479.85}$$

b)
$$100$$
$$- 62.837$$
$$\overline{38.837}$$

c)
$$4006.3$$
$$- 34.98$$
$$\overline{3971.48}$$

d)
$$45.6$$
$$32.87$$
$$+ 0.003$$
$$\overline{374.6}$$

8. The dot plot shows the number of goals scored by each player.
a) What was the most common number of goals scored?

b) How many players are represented on the dot plot?

c) How many goals were scored by all the players?

number of goals scored
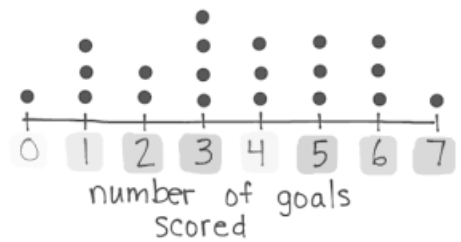
9. Show your work: **a)** 16^2 **b)** 5^4 **c)** $3^3 - 3^2$

10. How many different rectangles can you draw with an area (number of "tiles") of 12? What is the perimeter (number of "toothpicks") of each one? Show your work.

11. Owen loves to eat hamburgers. He goes to his neighborhood grocery store to buy ground beef and buns to make hamburgers at home. He buys a package of hamburger buns for $1.29 and a package of ground beef for $5.82. He only has a $10 bill and wonders if he can buy some ketchup and mustard, too. The ketchup is $1.89, and the mustard is $2.69. He does not have to pay sales tax on food. Does Owen have enough money to buy both the ketchup and the mustard? If he does, how much money will he have left over? If not, then what could he buy and how much would it cost? *Show your work.*

12. Study the dot pattern.
   a) Draw the 3rd and 5th figures.
   b) How many dots will there be in the 10th figure?
   c) How many dots will there be in the 50th figure?

Fig. 1   Fig. 2   Fig. 3   Fig. 4   Fig. 5

13. Alex earns $7.75 a day by walking dogs for his neighbors. If he walks dogs for 6 days, how much money will he make? Show how you got your answer.

14. Amanda and Jimmy have jobs as dog walkers. Examine the graph below and answer the following questions.
a) Who has more hours of dog walking?
b) Who has earned the least amount of money?
c) Are both students earning the same amount of money per hour?
   Show your work to justify your answer.