Math Concepts Problem Set 18   **Name**_____

Assigned Thursday 2/6, due Friday 2/14 ♥♥
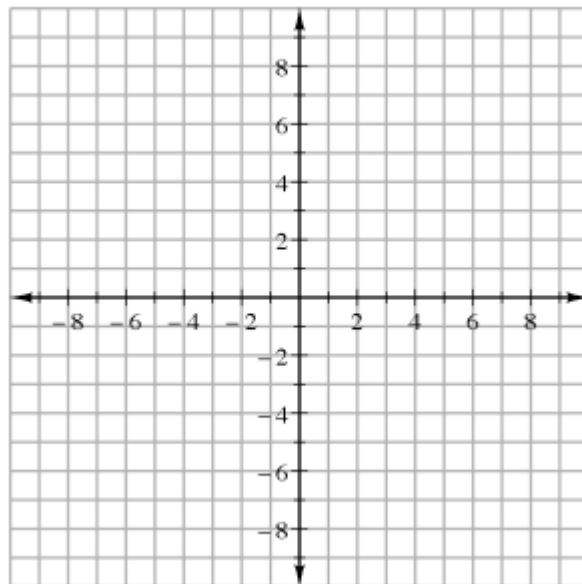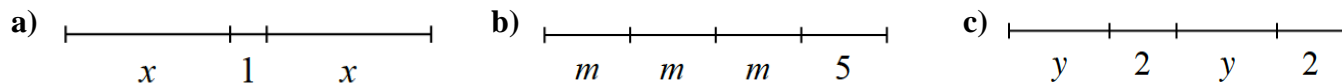
Period_____

1. Plot the following points, and connect them in order.
$(0, 2)$, $(8, 2)$, $(8, -7)$, $(-6, -7)$, $(-6, -2)$, $(0, -2)$, $(0, 2)$.
Find the area of your shape, in square units.

2. Find the distance between each pair of points.
a) $(5, 3)$ and $(5, 10)$

b) $(-9, 2)$ and $(-9, -8)$

c) $(-1, 7)$ and $(-7, 7)$

3. Make a portion web for each number:
a) 1%   **b)** $\frac{19}{25}$ **c)** 0.9   **d)** $\frac{1}{9}$

4. Write an algebra expression for each diagram below.

a) x 1 x

b) m m m 5

c) y 2 y 2

5. Croakie now has a new routine that is 59 feet long.
a) In his new routine, Croakie makes seven super jumps, all the same length, and then hops 3 feet. How long is each super jump?
b) If x represents the length of one super jump, write an expression that represents Croakie's routine.

6. Now Croakie can do a super high jump! The first time he performed his new super-high-jump routine, he did three super-high jumps and then hopped five feet. The second time, he did only two super-high jumps and then hopped six feet. Both times, he covered the same distance. His attempts are shown in the diagram below. First attempt x x x 5

Second attempt x x 6

a) How far does Croakie travel in one super-high jump? Explain or show how you know.
b) How long is his whole super-high-jump routine? How can you tell?

7. Use the histogram to the right to answer the questions.

a) How many people read more 6 or more books?

b) How many people read less than 2 books?

c) How many people read exactly 5 books?

d) How many people were counted for this histogram?

e) What percent of people read 9-11 books?

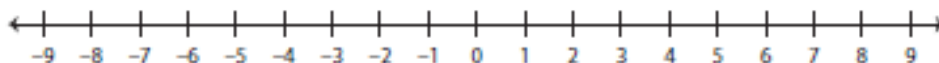**Number of Books Read in 3 Months**
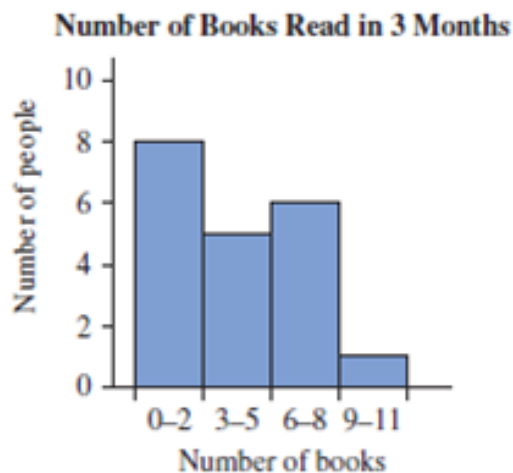
Show your work for #8-#10.

8. a) 55^2 **b)** 6^3 **c)** 2^5 **d)** 10^7

9. a) $50 - 11.22$ **b)** $5.1 \div 4$ **c)** $1234 \cdot 56$ **d)** $7.7 \div 6$

10. a) $555\frac{2}{3} + 45\frac{11}{12}$ **b)** $765\frac{1}{6} - 82\frac{7}{9}$ **c)** $5000\frac{3}{4} - 50\frac{1}{6}$

11. a) $-3 + 7$ **b)** $-10 + -10$ **c)** $-8 + 11$ **d)** $5 + -12$

    e) $|-12|$ **f)** $-|-6|$ **g)** $-(-4)$ **h)** $|-4 + -3 + -2|$

12. a) What is the ratio of lions to tigers?

    b) What is the ratio of tigers to animals?

    c) What percent of the animals are lions?

13. Graph the data on the histogram below. Amount of time spent solving a math puzzle (minutes) by study teams: 3, 15, 18, 14, 10, 14, 19, 8, 14, 14, 15, 19, 9