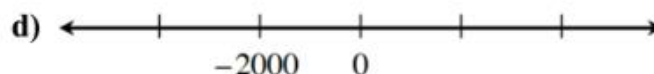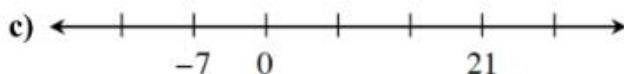**Math Concepts Problem Set 12**   Name_____
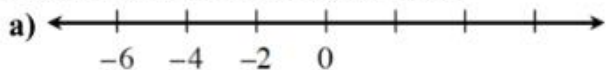
Assigned Thursday 12/5, due Friday 12/13

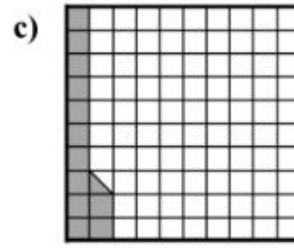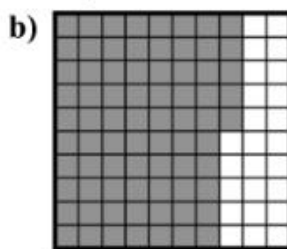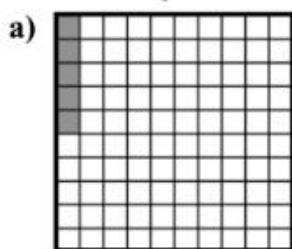**No Work Shown, No Credit Given**   Period_____

Problems #1-#6 can be completed on this paper. The work for #7-#14 needs to be attached on *a separate piece of paper*.

1. You can see in the examples below that not all number lines increase by one unit from mark to mark. Fill in the missing numbers.

a)
-6 -4 -2 0

b)
-15 -10 20
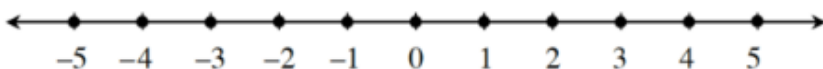
c)
-7 0 21

d)
-2000 0

2. The following representations have been drawn to represent portions of a 100% block. Write each of the portions as a percent, a fraction, and a decimal.

a)

b)

c)

3. Lucas' frog is sitting at -2 on the number line.
   a) His frog hops 4 units to the right, 6 units to the left, and then 8 more units to the right. Where does the frog land?
   b) What number is the opposite of where Lucas' frog landed?

-5 -4 -3 -2 -1 0 1 2 3 4 5

4. a) Plot the points listed below on the graph at right.. Then connect them in the order given and connect point D to point A.
$$A\ (2, 3),\ B\ (3, 7),\ C\ (7, 7),\ D\ (8, 3)$$
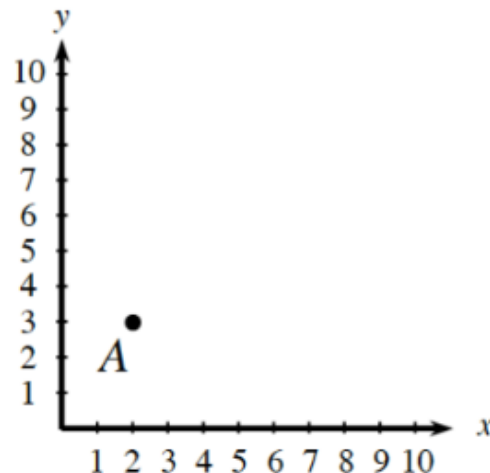   **b)** What is the name of the shape that you drew?

5. Convert each mixed number to an improper fraction.
   a) $1\frac{3}{4}$ **b)** $10\frac{1}{2}$ **c)** $3\frac{5}{7}$ **d)** $8\frac{2}{5}$

6. Convert each fraction to a mixed number.
   a) $\frac{12}{5}$ **b)** $\frac{13}{2}$ **c)** $\frac{20}{3}$ **d)** $\frac{22}{4}$

y

10
9
8
7
6
5
4
3
2 A
1

1 2 3 4 5 6 7 8 9 10 x

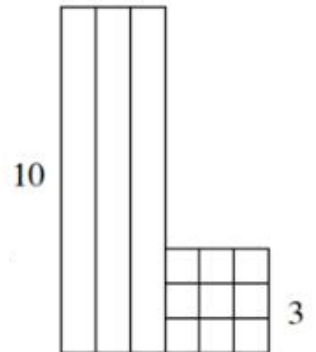**7. a)** $\frac{3}{4} + \frac{1}{6}$ **b)** $\frac{5}{8} - \frac{1}{4}$ **c)** $\frac{2}{3} + \frac{5}{9}$ **d)** $\frac{3}{8} - \frac{1}{12}$

8. The diagram at right is made up of Base Ten Blocks.
     a) Find the area of the shape.
     b) Find the perimeter of the shape.

10

3

9. Suzie wrote $134\% = \frac{134}{200}$. Is she correct? Why or why not?

10. 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: $4(317) = 4(300) + 4(10) + 4(7) = 1200 + 40 + 28 = 1268$
     a) $8(420)$ **b)** $9(502)$ **c)** $5(2222)$

11. Add or subtract the following decimals. *Show your work.*
a) $3.14 + 14 + 12.8$ **b)** $12.34 - 3.3$ **c)** $0.456 + 45.6$ **d)** $11 - 0.72$

12. Given the numbers 29% and 0.3, *explain* which number is larger by using words and/or pictures.

13. Find three fractions that are equivalent to $\frac{6}{20}$.

14. Make a portion web for each number.
     a) 7%   **b)** 0.1   **c)** $\frac{11}{25}$ **d)** $\frac{1}{20}$