

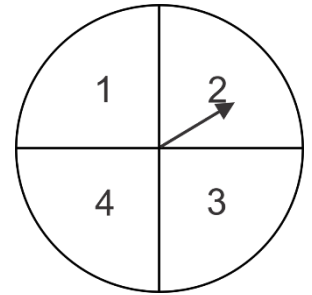
Pre-Algebra Problem Set 19

Name _____

Assigned Thursday 2/13, due Friday 2/21

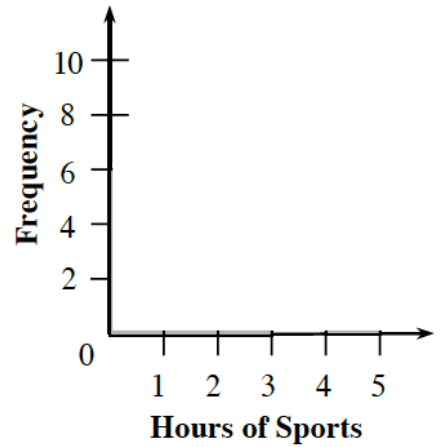
Period _____

1. a) What is the probability of the spinner landing on 2? Write your probability as a percent.
- b) What is the probability of the spinner landing on an even number?
- c) What is the probability of the spinner landing on a number less than 4?
- d) What is the probability of the spinner landing on a number less than 5?



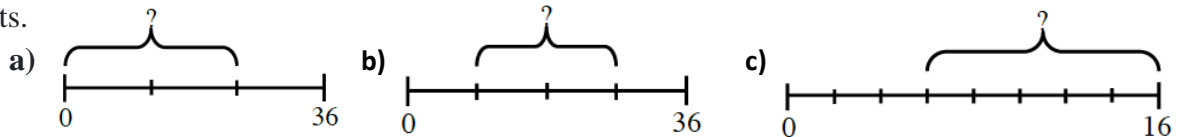
2. Graph the data on the histogram below. Hours spent doing after school sports each weekday by students:

0, 4, 0, 1, 1, 1, $\frac{1}{2}$, $1\frac{1}{2}$, 2, 2, $\frac{1}{2}$, 2, 2, 2, $1\frac{1}{2}$, $1\frac{1}{2}$, 1, 1, 2, 4, $\frac{1}{2}$, $\frac{1}{2}$, 2



3. Make a portion web for each number. a) 0.2 b) 0.05 c) 1.75 d) 0.001

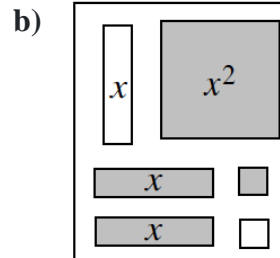
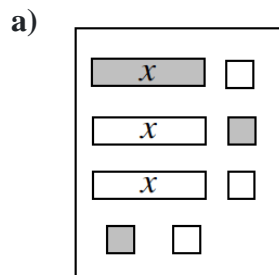
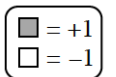
4. Identify the length of the missing section of each line. Assume that the lines are divided into equal parts.



5. Simplify by combining like terms.

a) $4x + 2 + 2x + x^2 + x$ b) $10x + 4 - 10 - 8x + 2$ c) $4 - x^2 + 3x - 2x^2 + 4$

6. Write the expression as shown on the Expression Mats, then simplify by making zeros and combining like terms.



7. Find the distance between each pair of points.

a) $(8, 3)$ and $(8, -2)$

b) $(-1, 9)$ and $(-5, 9)$

c) $(-7, 6)$ and $(4, 6)$

d) $(-3, -2)$ and $(-3, -4)$

8. A speed skater covered 1500 meters in 200 seconds. Find his unit rate of speed in meters per second.

9. Simplify by combining like terms.

a) $4(3x - 2) - 5x + x$

b) $10 - 8(10 - n) - 10$

c) $7(x + 2) - 9(x + 3) + 4$

10. Simplify each expression.

a) $\frac{4 - 16}{-2(-2)}$

b) $5(2 + (-9)) - 25$

c) $-3(4) - 5(4) - 2(7)$

11. Which table or tables below show a proportional relationship? Justify your answers.

a.

| | | | | | | | |
|-----|---|----|----|-----|-----|----|----|
| x | 5 | 7 | 9 | -8 | 0 | 11 | 15 |
| y | 9 | 13 | 17 | -17 | -19 | 21 | 29 |

b.

| | | | | | | | |
|-----|----------------|----|-----------------|----------------|-----|-----|-----------------|
| x | 7 | 14 | 91 | 9 | -12 | -36 | 81 |
| y | $3\frac{1}{2}$ | 7 | $45\frac{1}{2}$ | $4\frac{1}{2}$ | -6 | -18 | $40\frac{1}{2}$ |

c.

| | | | | | | | |
|-----|-----|-------|---|------|-----|----|---------------|
| x | -3 | -10 | 0 | 10 | 5 | 4 | $\frac{1}{2}$ |
| y | -27 | -1000 | 0 | 1000 | 125 | 48 | $\frac{1}{8}$ |

12. The shapes at right are similar.

- What is the scale factor?
- Find the sides labeled x and y .

