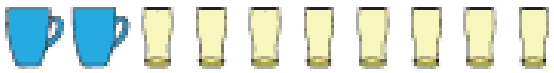
Math Concepts Problem Set 19 **Name**_____

Assigned Thursday 2/13, due Friday 2/21 **Period**_____

1. a) What percent are phones?
b) What percent are binoculars?

2. a) What is the ratio of coffee cups to water glasses?
b) What is the ratio of water glasses to total dishes?
c) What percent of the dishes are coffee cups?



3. Simplify each algebra expression.

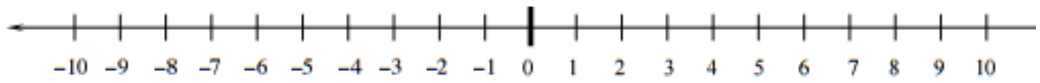
a) x + x + 3 + x + x **b)** y + 1 + y + 1 + 4y **c)** 5w – 2w + 3w + w

4. Write the algebra expression for each phrase. Use your iPad to look up word definitions.

a) the product of *k* and 3 **b)** nine less than *n* **c)** the sum of *w* and ten
d) twelve more than *m* **e)** the sum of 2 and *x* **f)** the product of 129 and *y*

5. Use the number line to find your answers.

a) $-2 + -5 + 1$ **b)** $-9 + 7 + -7$ **c)** $10 + -11 + 3$ **d)** $-3 + -3 + -3 + -3$



6. Simplify each fraction to a mixed number.

a) $\frac{17}{10}$ **b)** $\frac{17}{7}$ **c)** $\frac{17}{3}$ **d)** $\frac{30}{4}$ **e)** $\frac{603}{100}$

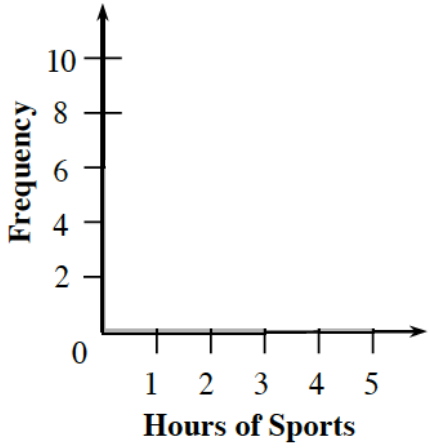
7. Convert each mixed number to an improper fraction greater than one.

a) $1\frac{7}{8}$ **b)** $2\frac{4}{5}$ **c)** $3\frac{1}{20}$ **d)** $5\frac{3}{7}$ **e)** $10\frac{2}{3}$

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

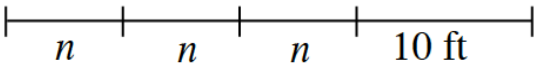
9. Graph the data on the histogram below. Hours spent doing after school sports each weekday by students:

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

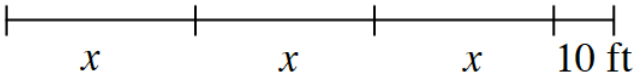


10. Kelani wants to cut a piece of rope into several equally-sized pieces and then have a 10-foot piece remaining. Help Kelani figure out how long to make each of the equally-sized pieces.

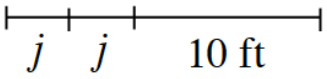
a) A 25-foot piece of rope (find n).



b) A 310-foot piece of rope (find x).



c) A 13-foot piece of rope (find j).



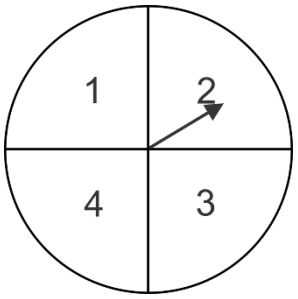
11. Richard's strategy for changing a percent to a decimal is to put the decimal point in front of the percent number. An example of his work is shown to the right. Do you agree with Richard's method? Explain your reasoning.

8% = 0.8

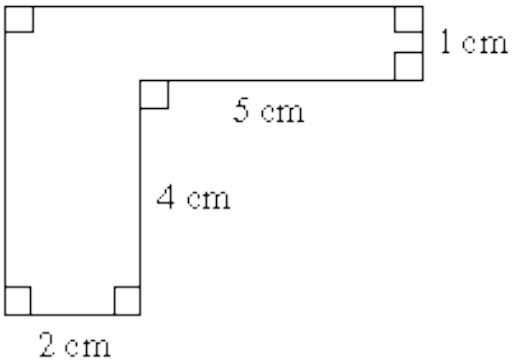
80% = 0.80

800% = 0.800

12. 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?



13. Find the area.



14. 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)