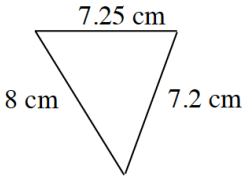
Math Concepts Problem Set 8 **Name**_____

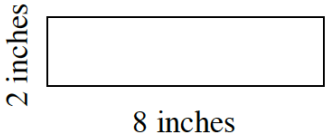
Assigned Thursday 10/24, due Friday 11/8 (Two weeks due to conferences)

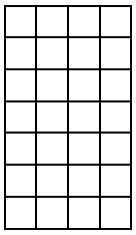
No Work Shown, No Credit Given **Period**_____

Problems #1-#8 can be completed on this paper. The work for #9-#14 needs to be attached on *a separate piece of paper*.

1. a) Find the perimeter. **b)** Find the area <u>and</u> perimeter. **c)** Find the area.







2. The stem-and-leaf plot below contains the age of each of the United States presidents (as of 2011) at the time of his inauguration. Use it to answer the questions that follow.

a) How old was the oldest president?

b) How old was the youngest president?

c) How many presidents are represented?

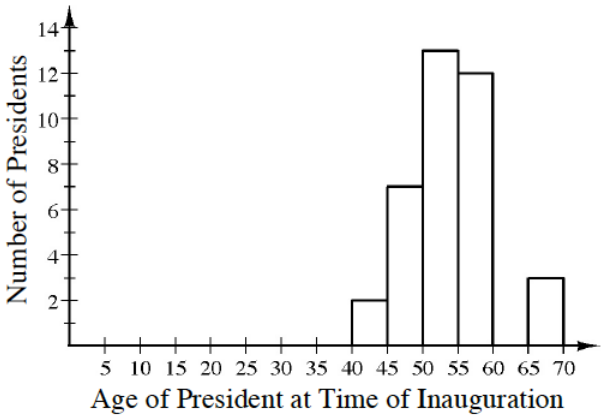
4	2 3 6 6 7 7 8 9 9
5	0 1 1 1 1 1 2 2 4 4 4 4 4 5 5 5 5 6 6 6 7 7 7 7 8
6	0 1 1 1 2 4 4 5 8 9

3. The histogram represents some of the data from stem-and-leaf plot above.

a) If a president is 55 years old, which bin should they be in? 50-55 years or 55-60 years?

b) Fill in the missing bar. How tall should the bar be?

c) How many presidents are younger than 50?

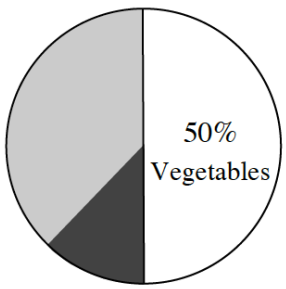


4. Remember that factors are numbers that multiply to give you a particular product.

a) Find all the factors of 16 **b)** Find all the factors of 18.

5. Ruth's brother, Ethan, planted a garden for her as a surprise while she was away. He planted seeds for vegetables in 50% of the garden. He also planted flowers and herbs.

The entire circle in the graph at right represents the area of Ruth's garden. If the lightly shaded portion represents flowers, estimate what percentage of the garden could be herbs. Explain your estimate.



6. Round to the nearest whole number.

a) 25.39 **b)** 19.067 **c)** 11.82 **d)** 0.498 **e)** 0.555

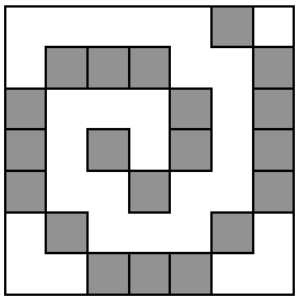
7. Assume that the shaded tiles in the large square above each have an area of one square foot. Use this information to answer the following questions.

a) What is the total area of the shaded tiles?

b) What is the total area of the un-shaded tiles?

c) Find the total number of square feet of area in the figure.

d) What is the perimeter of the tile patio?



8. Hector measured the area of his desktop by covering it with quarters (25¢). Can he find the area using these circular units of measure exactly, or will he have to estimate? *Explain* your answer.

---------- **Please show your work for #9-#14 on a separate piece of paper**. ----------

9. Show your work!

a) 34.62 + 74.7 **b)** 3.15 + 36.8 + 7 **c)** 237.99 – 13.2

d) 0.275 + 27.5 **e)** 95 – 0.2 **f)** 18.3 + 11 + 2.95

10. a) 7^3 **b)** 12^2 **c)** 10^6 **d)** 5^4 **e)** 2^5

11. Find the prime factorization for each number**: a)** 130 **b)** 900 **c)** 72

12. Draw and label three different rectangles, each with an area of 20 units. Do the rectangles have the same *perimeter*? Explain your thinking.

13. James is painting his 10-by-8-foot bedroom wall that contains a 2-by-3-foot window.

a) Draw a diagram of his wall and the window.

b) How many square feet of wall does he need to paint?

14. Find the value of each expression.

a) 3 + 6(5) **b)** 6(5) + 3 **c)** $1 + 7 \cdot 3$ **d)** $5^3 - 5^2$