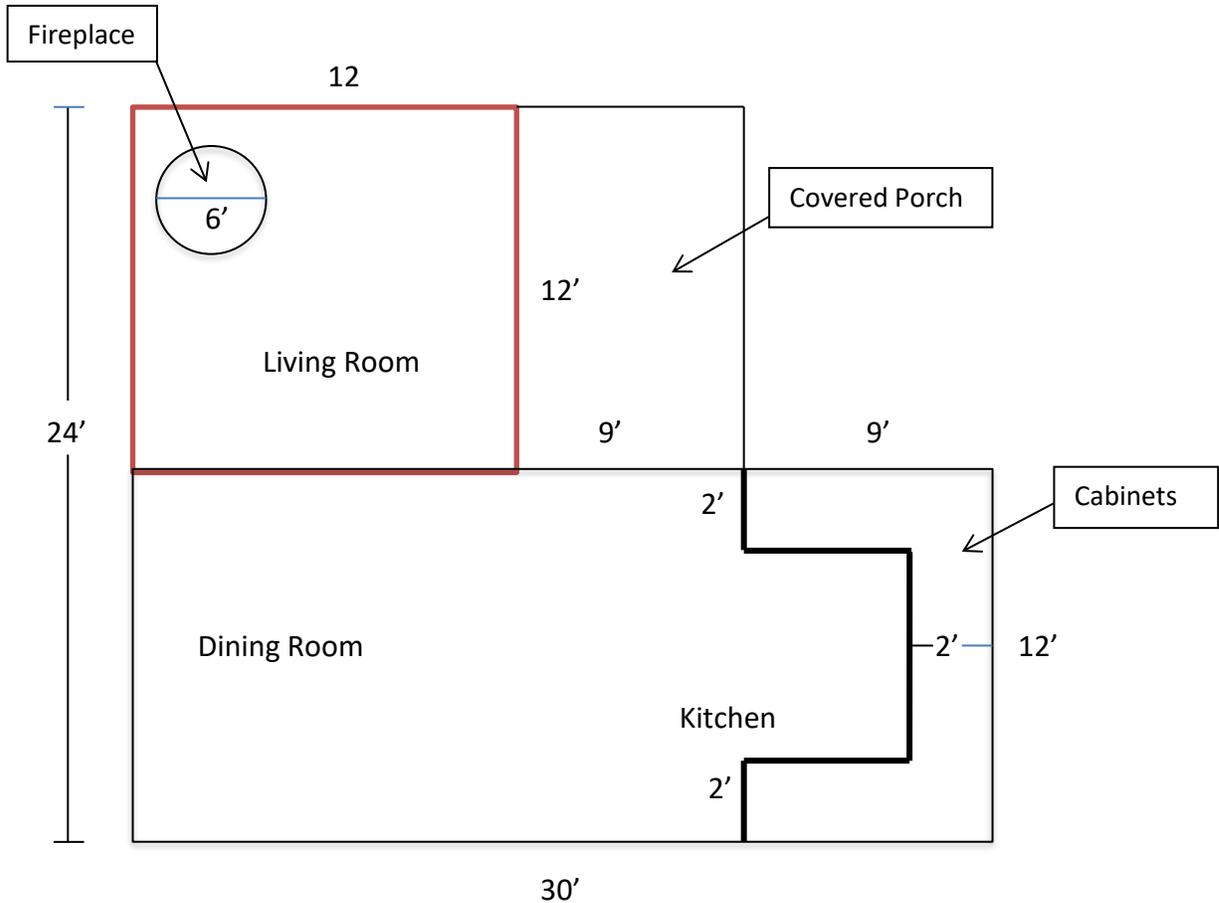


Name _____ Date _____

Area, Perimeter, and Circumference Worksheet

Below is a drawing of a Living Room, Dining Room, and Kitchen. You are the builder. Study the picture and then answer the questions.



- (a) The owners of the home want you to install carpet in the Living Room. How many square feet of carpet will you need? You don't need to subtract the area of the Fireplace.
(b) Carpet is typically sold in square YARDS, not square FEET. Convert your answer to square yards by dividing by 9. How many square yards of carpet will you need?

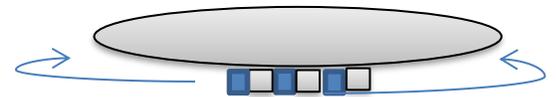
Name _____ Date _____

Area, Perimeter, and Circumference Worksheet page 2

2. The owners want wood flooring in the Dining Room and Kitchen. What is the area of the floor in those two rooms? Be sure to subtract the area of the cabinets.

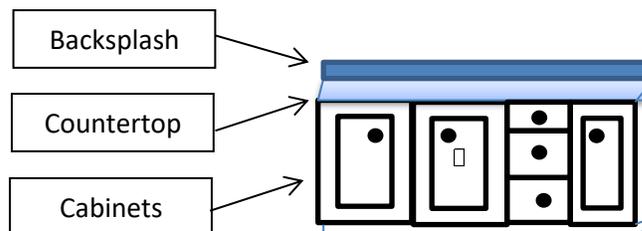
3. The owners want the fireplace to have a stone floor. The diameter is 6'. How many square feet of stone will you need to cover the Fireplace floor?

4. The perimeter of the fireplace floor will be covered in 1" tiles. Find the circumference of the floor and then determine how many tiles you will need to go all the way around the 6' circle.



5. The covered porch floor is made of concrete. The concrete pad is 6" thick. How many cubic feet of concrete will you need to make the concrete porch?

6. The countertops will have a backsplash along the wall. How many feet of backsplash will you need?



ANSWERS: Area, Perimeter, and Circumference Worksheet

1. (a) The owners of the home want you to install carpet in the Living Room. How many square feet of carpet will you need? You don't need to subtract the area of the Fireplace.

The living room measures 12' by 12' $12' \times 12' = 144 \text{ sq feet}$

(b) Carpet is typically sold in square YARDS, not square FEET. Convert your answer to square yards by dividing by 9. How many square yards of carpet will you need?

$$144 \div 9 = 16 \text{ square yards}$$

2. The owners want wood flooring in the Dining Room and Kitchen. What is the area of the floor in those two rooms? Be sure to subtract the area of the cabinets.

Together the two rooms measure 12' by 30'. $12 \times 30 = 360 \text{ sq feet}$

The longest row of cabinets measure: 12' by 2'. The two sides are 7' by 2' each. The area taken up by the cabinets is:

$$12' \times 2' = 24 \text{sq feet} \quad 7' \times 2' \times 2 = 28 \text{sq feet} \quad 24 + 28 = 52 \text{sq}' \text{ of cabinet space}$$

Subtract the area of the cabinets from the area of the two rooms: $360 \text{sq}' - 52 \text{sq}' = 308 \text{sq}'$

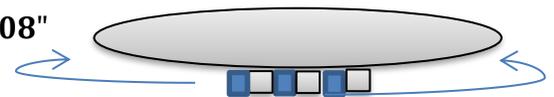
3. The owners want the fireplace to have a stone floor. The diameter is 6'. How many square feet of stone will you need to cover the Fireplace floor?

$$A = \pi r^2 \quad \text{Area} = 3.14 \times 9 \quad \text{Area} = 28.26 \text{ square feet of stone}$$

4. The perimeter of the fireplace floor will be covered in 1" tiles. Find the circumference of the floor and then determine how many tiles you will need to go all the way around the 6' circle.

$$C = d\pi \quad 6' = 72 \quad \text{Circumference} = 72 \times 3.14 \quad C = 226.08''$$

You will need 227 tiles to make it all the way around.



5. The covered porch floor is made of concrete. The concrete pad is 6" thick. How many cubic feet of concrete will you need to make the triangular shaped step?

You need to find the volume of the concrete. Multiply all three dimensions to get the volume. All the units of measurement need to be the same. I will turn the 6" measurement into .5 feet.

$$12' \times 9' \times .5' = \mathbf{54 \text{ cubic feet of concrete}}$$

6. The countertops will have a backsplash along the wall. How many feet of backsplash will you need?

There are three walls that have countertops up against them. They measure 9 feet, 12 feet, and 9'. **The total is 30 feet of backsplash.**