LESSON 10 – PRACTICE PROBLEMS

1. Find the circumference or perimeter given each described situation. Include a drawing of the shape with the included information. Show all work. As in the examples, if units are included then units should be present in your final result. Use 3.14 for pi and round answers to tenths as needed.

a. Find the perimeter of a rectangle with height 6 inches and length 12 inches.

b. Find the perimeter of each of the following: a square with side 2 feet, a square with side 4 feet, a square with side 8 feet, a square with side 16 feet.

c. Find the circumference of a circle with radius 3 meters.

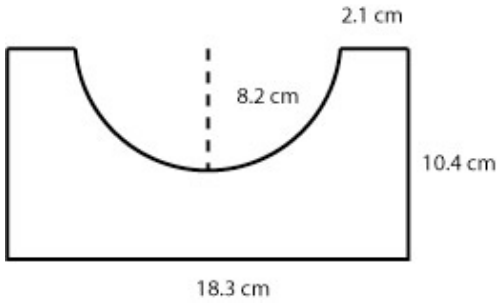
d. If the circumference of a circle is 324 cm, what is the radius?

e. Find the perimeter of a triangle with sides of length 6 feet, 5 feet, and 40 inches. Leave your final answer in inches.

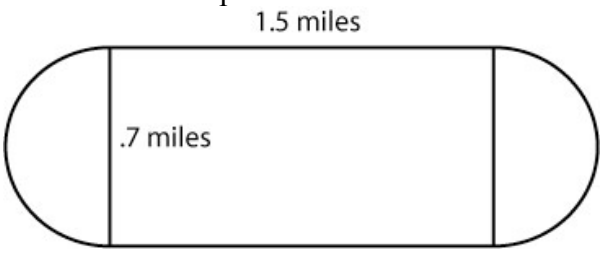
2. Find the circumference or perimeter given each described situation. Show all work. As in the examples, if units are included then units should be present in your final result. Use 3.14 for pi and round answers to tenths as needed.

a. If the radius of each half circle is 6 inches, find the perimeter of the object.

b. Find the perimeter of the shape below.



c. Find the perimeter of the shape below.



3. Find the area given each described situation. Include a drawing of the shape with the included information. Show all work. As in the examples, if units are included then units should be present in your final result. Use 3.14 for pi and round answers to tenths as needed.

a. Find the area of a rectangle with length 3.45 and width 4.28.

b. Find the area of each of the following: a square with side 2 feet, a square with side 4 feet, a square with side 8 feet, a square with side 16 feet.

c. Find the area of a triangle with base 4 m and height 12 m.

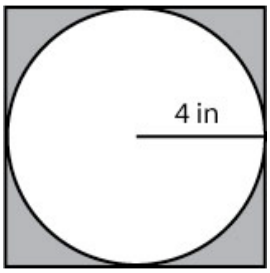
d. Find the area of a circle with radius 4.56 feet.

e. Find the area of a rectangle with length 23 m and width 134 cm. Leave your final answer in square meters.

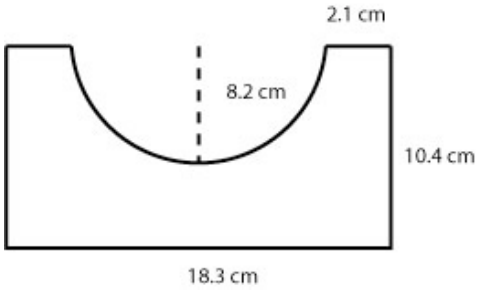
4. Find the area as requested below. Show all work. As in the examples, if units are included then units should be present in your final result. Use 3.14 for pi and round answers to tenths as needed.

a. If the radius of each half circle is 6 inches, find the area of the object.

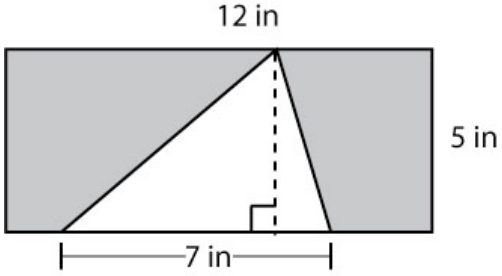
b. Find the area of the shaded region in the shape below.



c. Find the area of the shape below.



d. Find the area of the shaded region in the shape below.



5. Solve the following application problems showing all work. Be sure to circle your GIVENS and underline your GOALS.

a. Draw 4 rectangles each that have area 24 square feet but different perimeters. Try to draw your rectangles with some relative accuracy to each other and include units.

b. In high school, Frank's basketball coach made the team run 15 times around the entire court after every practice. If the boys had to stay outside the lines of the court, what was the least distance they would run? Find the initial distance in feet and then convert to miles. The dimensions of a high school basketball court are 50 feet by 84 feet. If the edges of the court are 2 feet, how much more would someone run that stayed on the inside edge vs. the outside edge? Present your final answer in feet and miles.

c. The radius of the earth is about 3961.3 miles. If a satellite orbits at a distance of 3000 miles above the earth, how many miles would it travel in one trip around the planet?

d. Jarod is painting a room in his house and has a section of wall that will be painted in two colors. The top half of the wall will be white and the bottom half will be lavender. If the wall is 5 meters long and 4 meters high, how much space will he be painting in each color?

e. When the length of a side of a square doubles, how does the area change? Refer to problems 1b and 3b to help you.