Name: _____
MATH 100
Fall 2023
HW 4: Due 09/18

"She was born in the '80s. She still uses her phone as a phone!"
– Troy Barnes, Community

Problem 1. (10pt) Compute the following:

(a) Find the missing leg of a right triangle with leg 7 and hypotenuse 34.

(b) The distance between the points $(-3, 8)$ and $(6, 2)$.

(c) The area of a parallelogram with base 44.3 ft and height 13.9 ft.

(d) The volume of a sphere with diameter 0.86 in.

(e) The surface area of a building that is 300 ft long, 95 ft deep, and 18 ft tall.

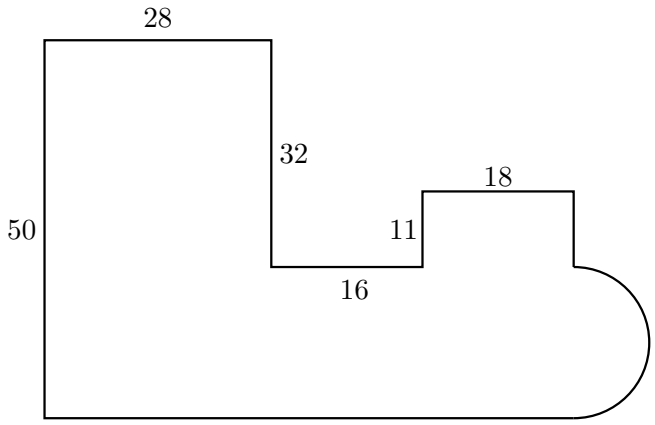
Problem 2. (10pt) You are going to paint a barn silo. The silo is 14 ft across and 80 ft high and is approximately shaped like a cylinder.

(a) What is the surface area of the barn silo?

(b) If the paint can costs $19 per gallon and each can covers 350 square feet, how many cans will you need to complete this job? How much will the cost be?

(c) If you were to also paint the 'rectangular shaped' barn next to the silo (180 ft long, 60 ft wide, and 40 ft tall), how many more paint cans would you need? [Assume that you will not paint the barn roof or floor.]

Problem 3. (10pt) Consider the region shown below:



(a) Find the perimeter of the region.

(b) Find the area of the region.

(c) If the region were actually the shape of a building, as viewed from above, assuming that the building is 'regularly shaped', 38 ft high, and all the measurements in the figure shown above were in feet, what is the volume of the building?