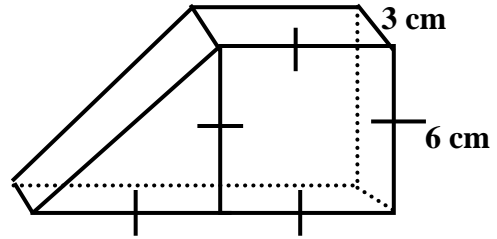


PRE-AP GEOMETRY
Surface Area and Volume

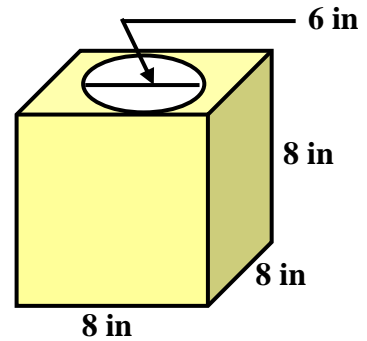
Name _____

Leave your answers in terms of π and/or rounded to three decimal places.

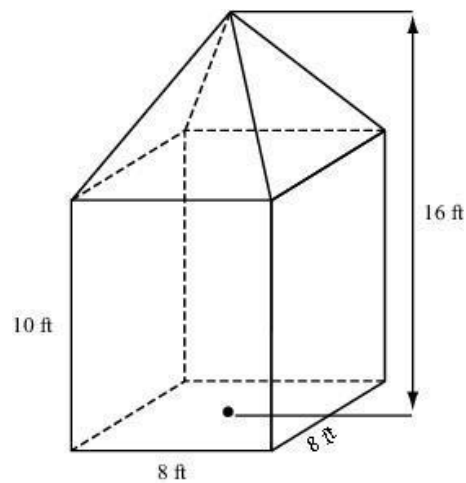
1. Find the volume of the figure.



2. Find the volume of the figure. The cylinder has been cut out.

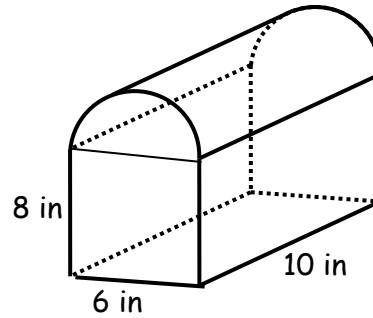


3. The figure shown is a rectangular prism with a right square pyramid on top. Which of the following is the surface area of the entire solid excluding the square base?

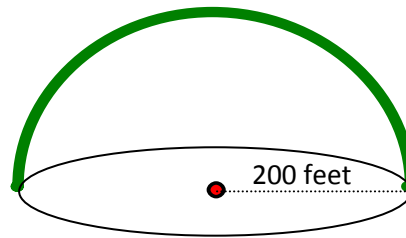


4. Mrs. Mumford's lunch box is in the shape of a half cylinder on a rectangular prism.

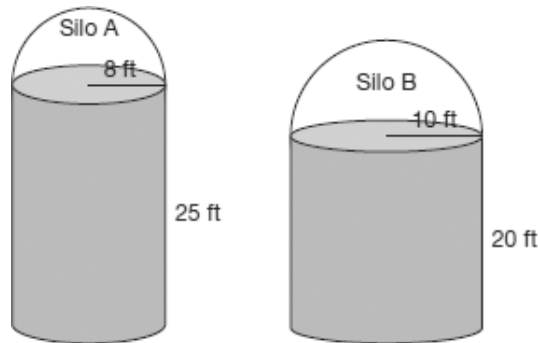
a. Find the total volume



5. Frisco wants to build another sports complex. The complex will include a turf field covered by a large dome in the shape of a **hemisphere**. How much material is needed to complete the dome?



6. The manager of Sunnybrooke Farm plans to buy a new grain silo. He needs to choose between two options. Silo A is a cylinder of height 25 feet and a radius of 8 feet. The roof is a hemisphere with the same radius. Silo B is a cylinder of height 20 feet and a radius of 10 feet. The roof is a hemisphere with the same radius.



a. Determine the volume of each silo.

b. The farm manager will have to paint the outside of whichever silo he decides to purchase. Determine the surface area to be painted.