

# Surface Area, Volume and Capacity | Assignment 2

Name:

Date:

This assignment is...

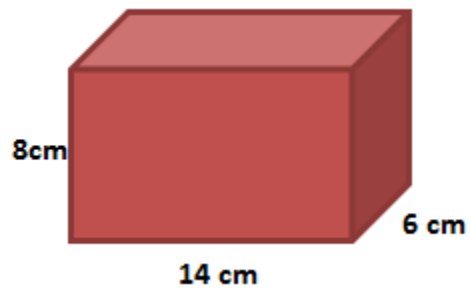
Is Good to go

Needs  
Corrections

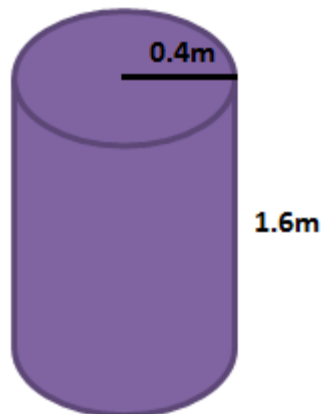
Make sure to show all of your work! You will be asked to make corrections if steps are not shown.

1. Calculate the volume of the following objects:

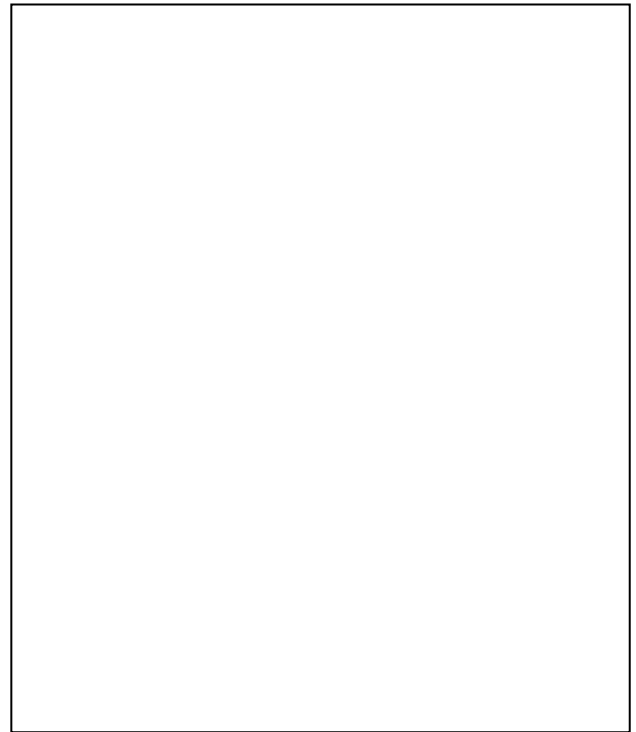
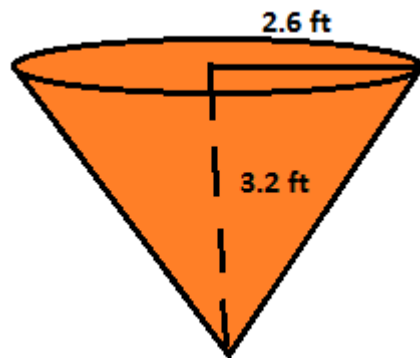
a.



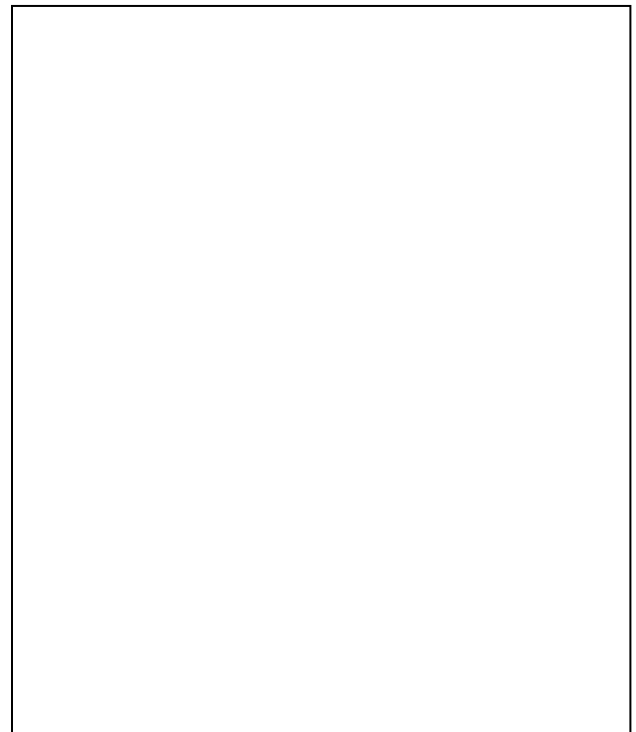
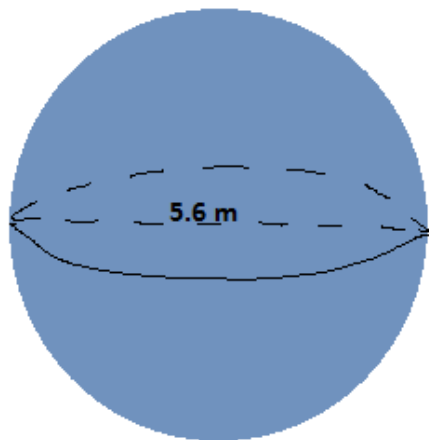
b.



c.



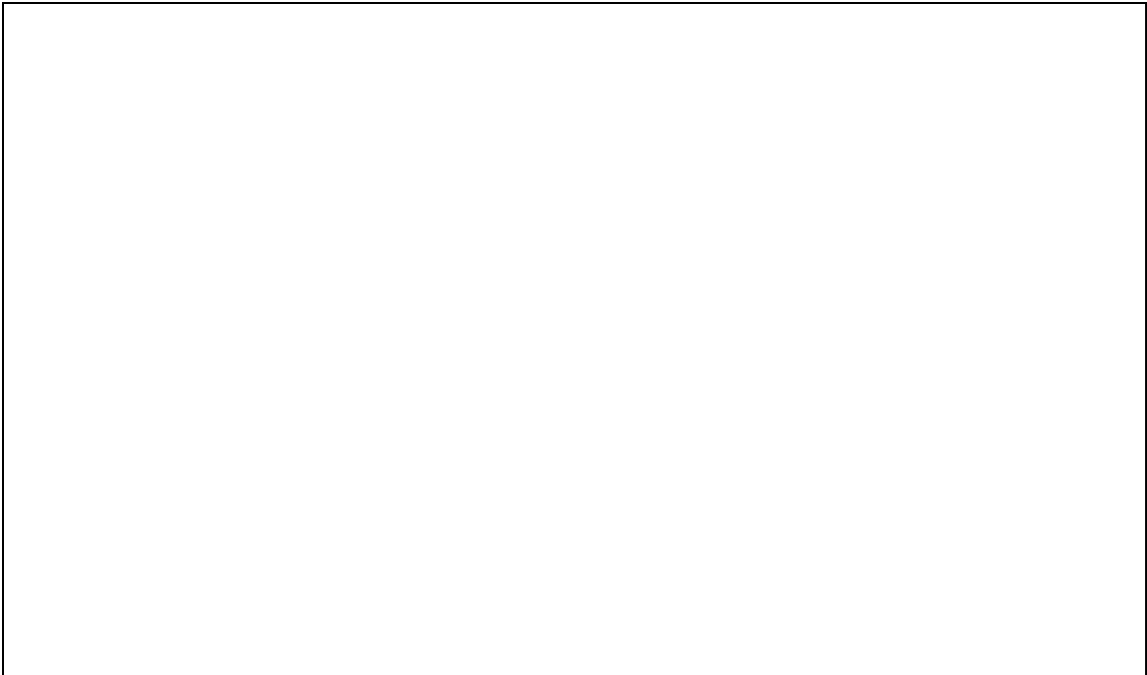
d.



2. A drill bit, to dig massive holes in the earth, is designed in the shape of a cone so that it is easier to dig farther into the earth. The slant height of the bit measures 5.2 metres and the diameter of the base measures 3.8m. If you were to drill just until the cone was level with the ground, how much earth would be displaced?

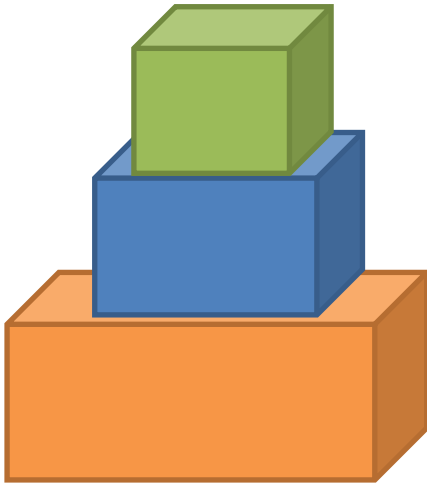


3. A moving company is trying to store boxes in a storage room that has the dimensions, 5m by 3m by 2m. How many boxes can fit in this space if each is 10cm by 6cm by 4 cm?



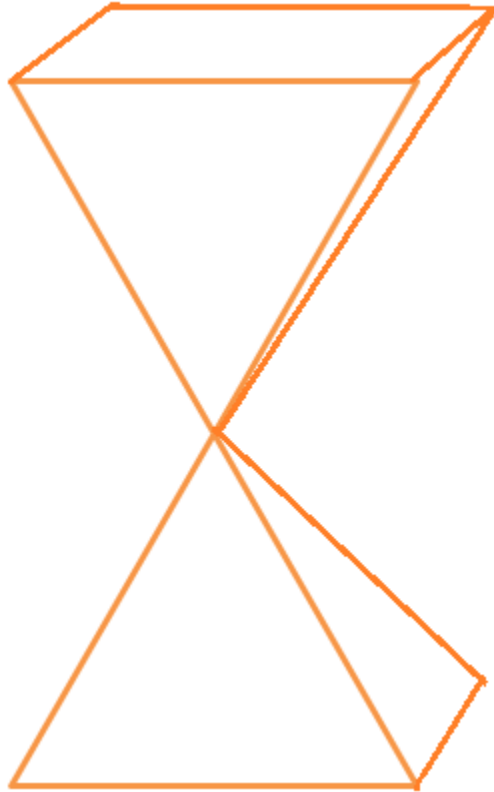
4. Calculate the volume of these complex geometric figures:

a.



The following is a diagram of three boxes stacked one on top of the other. The top boxes has measurements of 5 inches by 4 inches by 7 inches, the middle box has measurements of 12 inches by 14 inches by 11 inches and the bottom box has measurements of 24 inches by 18 inches by 24 inches. What is the volume of the stack?

b.



Two square based pyramids are stacked one on top of the other so that they form the classic 'egg timer'. What is the possible volume of sand that this egg timer could hold if the based has a measure of 5 cm by 5cm and the height of each pyramid is 7 cm?

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5. Find the following measurements to the nearest tenth.
- Radius of a sphere with a volume of  $330 \text{ cm}^3$ .

- The radius of a cone with a height of  $3\text{m}$  and a volume of  $30\text{m}^3$ .

6. Construct a net diagram for the following pyramid, labelling the length of all the dimensions that apply. Then calculate the surface area and the volume.

