

10.8 Composite Solids

Worksheet

Name _____

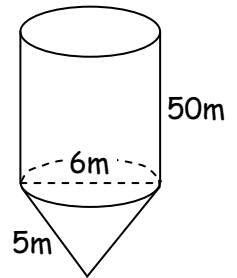
Period _____

Keep answers in terms of π , unless indicated to round to the nearest tenth.

A well, with a cylindrical wall of 50 m. and a diameter of 6 m., is dug.

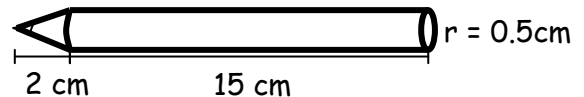
The bottom of the well is tapered to a cone with slant height of 5 m.

Building codes require the well to be covered.



1. Find the height of the cone.
2. Find the amount of material needed to construct the surface area of the well.
3. Find the volume of water that this well could hold.

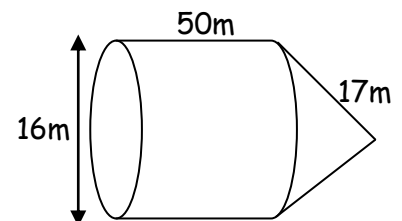
A small lead pencil has a cylindrical base and a conical point.



4. Find the slant height of the cone. (Use the Pythagorean theorem.)
Round to the nearest tenth.

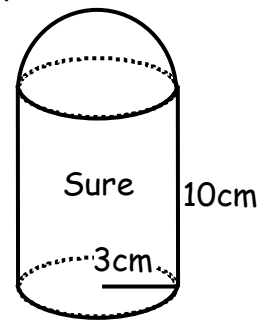
5. Find the surface area of the whole pencil.

A rocket has dimensions as shown to the right. The entire rocket is filled with fuel.



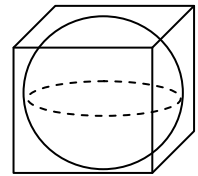
6. Find the height of the cone?
7. Find the amount of material needed to construct the surface area of the rocket.
8. What is the volume of fuel that the rocket may contain?

9. A stick of Sure Solid deodorant is shown to the right.
Find the amount of material (surface area) needed to construct the container.

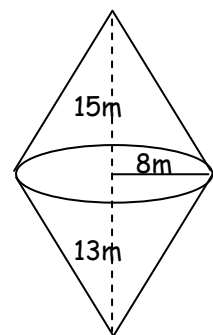


The sphere just fits in a cube with edges 12 in. long.

10. What is the radius of the sphere?
11. What is the volume of the space between the sphere and cube?
Round to the nearest tenth.



12. Find the volume of the composite solid. Round to the nearest tenth.



Solids 13 Worksheet Key

1. 4 m

2. $315\pi \approx 989.6 \text{ m}^2$

3. $462\pi \approx 1451.4 \text{ m}^3$

4. 2.1 cm

5. $16.3\pi \approx 51.2 \text{ cm}^2$

6. 15 m

7. $1000\pi \approx 3141.6 \text{ m}^2$

8. $3520\pi \approx 11,058.4 \text{ m}^3$

9. $87\pi \approx 273.3 \text{ cm}^2$

10. 6 in.

11. $1728 - 288\pi \approx 823.2 \text{ in}^3$

12. 1876.6 m^3