

Launch: Match each volume formula with the correct solid.

1. Prism
2. Pyramid
3. Cylinder
4. Cone
5. Sphere

A. $V = \frac{4}{3}\pi r^3$

B. $V = \frac{1}{3}\pi r^2 h$

C. $V = \frac{1}{3}Bh$

D. $V = Bh$

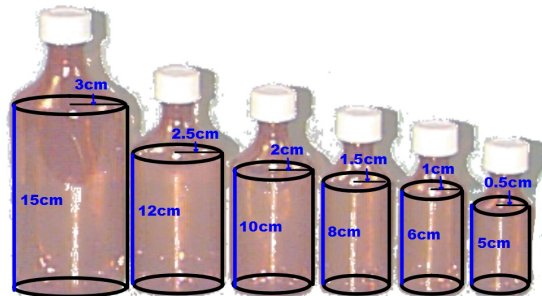
E. $V = \pi r^2 h$

Career Lesson - Volume

Objective: To find volumes of solids as used in careers in health and human services.

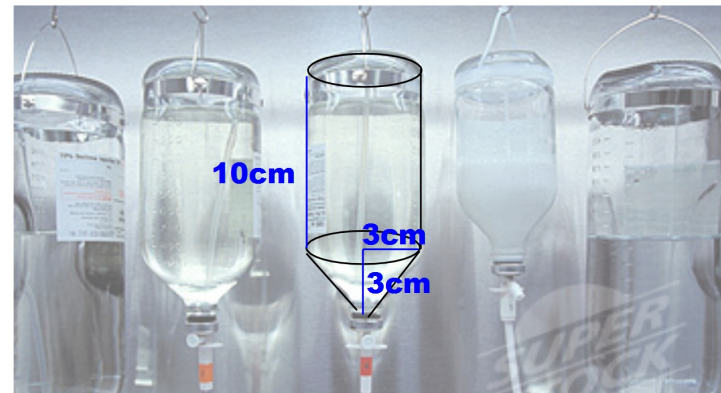
When you work in a pharmacy, you often have to determine what size bottle to use to dispense a medication.

Assume a patient needs 150ml (cm^3) of cough syrup. Which bottle should you choose. (Make sure there is no liquid in the neck of the bottle and choose the smallest bottle that can contain all of the liquid) Use 3.14 for π .

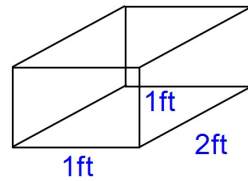


In the medical field, nurses and doctors often have to work with IVs (Intravenous solutions). Sometimes (depending on the solution) the liquid for an IV is stored in a cylindrical glass bottle.

What is the volume of the IV solution? (use 3.14 for π)
How long will it take for the entire solution to be infused (used up), if it is infused at a rate of 1.5cm^3 per minute?



A criminal investigator makes an arrest for a marijuana possession. What is the volume of the marijuana found in cubic feet? Assume that each cubic foot weighs about 7.5kg. What type of felony will the criminal be charged with?



Marijuana Charges in Iowa

"super" Class B Felony: 1000kg or more

"normal" Class B Felony: 100kg-1000kg

Class C Felony: 50kg-100kg

Class D Felony: 50kg or less

Source: <http://www.grilaw.com/CM/Custom/IowaDrugOffenses.asp>