

Answer on Question #57740 - Math - Geometry

A cork in the shape of a cylinder has a radius of 2cm a height of 5cm and weighs 2.5 grams. What is the volume of the cork? What is the corks density in grams per cubic centimeter? That is how many grams of cork are there per cubic centimeter?

$$R = 2\text{cm}$$

$$h = 5\text{cm}$$

$$m = 2.5\text{grams}$$

$$V - ?, \rho - ?$$

$$V = \pi R^2 h = 3.14 * 4 * 5 = 62.8 \text{ cm}^3$$

$$\rho = \frac{m}{V} = \frac{2.5}{62.8} = 0.0398 \frac{g}{\text{cm}^3}$$

Answer: $V = 62.8 \text{ cm}^3, \rho = 0.0398 \frac{g}{\text{cm}^3}$