

A brass doorknob has a volume of 40.0 cubic centimeters and a mass of 354 grams. The density of an object tells us how much mass it has in a certain volume. To calculate density, you need to divide the mass of the object by its volume. $\text{Density} = \text{Mass} / \text{Volume}$. In this case, the mass of the brass doorknob is 354 grams, and its volume is 40.0 cubic centimeters. To find its density, divide the mass (354 grams) by the volume (40.0 cubic centimeters). $\text{Density} = 354 \text{ grams} / 40.0 \text{ cubic centimeters}$. Now, do the math by using a calculator. The answer you get will be the density of the brass doorknob. Make sure to write the answer to the hundredths place, which means including two decimal points for accuracy. For a better understanding, let's break it down further in simple steps.