## PHYSICS

A golden-coloured cube is handed to you. The person wants you to buy it for $\$ 100$, saying that is an old nugget. You pull out your old geology text and look up gold in the mineral table, and read that its density is $19.3 \mathrm{~g} / \mathrm{cm}$. you measure the cube and find that it is 2 cm on each side, and weighs 40 g . What is its density? Is it gold? Should you buy it?

