Question #85052, Chemistry / General Chemistry

A perfectly spherical piece of metal is found at the bottom of a wishing well. The mass of the object is 1.15 kg and the radius is 0.07 m.
What is its density? Answer in units of kg/m^3.

Solution

$\rho = \dfrac{m}{V} = \dfrac{3m}{4\pi R^3}$, where ρ – density, R – sphere radius;

$\rho = \dfrac{3 \times 1.15}{4 \times 3.14 \times 0.07^3} = $ **800.8 (kg/m^3)**

Answer

800.8 kg/m^3 is the density of the spherical piece.