|  |  |  |
| --- | --- | --- |
| **Density, Mass and Volume** | | |
| **(a)** | **(b)** | **(c)** |
| A metal cube with side length has a mass of . Find the density of the metal in . | A solid cylinder has a radius of and a height of . The density of the cylinder is . Calculate the mass of the cylinder in grams to 3 significant figures. | A spherical boulder has a radius of . If the boulder has a mass of , find its density in . Give your answer to 3 significant figures. |
| **(d)** | **(e)** | **(f)** |
| A prism has a mass of and a density of . If the prism has a cross sectional area of , calculate the length of the prism. | A wooden cuboid has dimensions by by . The cuboid has density and mass . Find the value of . | A cube of side length and mass has the same density as a cylinder of mass . If the radius of the cylinder is , find its height. |
| **(g)** | **(h)** | **(i)** |
| of aluminium and of copper are melted down and mixed together to form an alloy. Aluminium has density and copper has density . Find the density of the alloy. | Melted chocolate has a density of  and milk has a density of . of melted chocolate is mixed with of warm milk to make a drink. Find the density of the drink in . | A toy is made of a metal hemisphere with a wooden cone on top. The hemisphere has a radius of . The cone also has a radius , a height of and density . If the average density of the toy is , find the density of the metal. |