

1. Mass, weight and density

1. A squared brass plate is 2mm thick and has a mass of 1.05kg. The density of brass is 8.4g/cm. Calculate the length of the plate in centimeters. (3mks)
2. A sphere has a surface area 18cm^2 . Find its density if the sphere has a mass of 100g. (3mks)
3. Nyahururu Municipal Council is to construct a floor of an open wholesale market whose area is 800m^2 . The floor is to be covered with a slab of uniform thickness of 200mm. In order to make the slab, sand, cement and ballast are to be mixed such that their masses are in the ratio 3:2:3. The mass of dry slab of volume 1m^3 is 2000kg. Calculate
 - (a) (i) The volume of the slab (2mks)
 - (ii) The mass of the dry slab. (2mks)
 - (iii) The mass of cement to be used. (2mks)
 - (b) If one bag of the cement is 50kg, find the number of bags to be purchased. (1mk)
 - (c) If a lorry carries 10 tonnes of ballast, calculate the number of lorries of ballast to be purchased. (3mks)
4. A sphere has a surface area of 18.0cm^2 . Find its density if the sphere has a mass of 100 grammes. (3 mks)
5. A piece of metal has a volume of 20 cm^3 and a mass of 300g. Calculate the density of the metal in kg/m^3 .
6. 2.5 litres of water density 1g/cm^3 is added to 8 litres of alcohol density 0.8g/cm^3 . Calculate the density of the mixture