

N235 Compound measures 2

Q1.

A gold bar has a mass of 12.5 kg.

The density of gold is 19.3 g/cm^3

Work out the volume of the gold bar.

Give your answer correct to 3 significant figures.

..... cm^3

(Total for question = 3 marks)

Q2.

A box exerts a force of 140 newtons on a table.

The pressure on the table is 35 newtons/m^2 .

Calculate the area of the box that is in contact with the table.

.....

(Total for question is 3 marks)

Q3.

$$\text{Pressure} = \frac{\text{force}}{\text{area}}$$

Find the pressure exerted by a force of 900 newtons on an area of 60cm².
Give your answer in newtons/m².

..... newtons/m²

(Total for question = 2 marks)

Q4.

Liquid **A** has a density of 1.42 g/cm³

7 cm³ of liquid **A** is mixed with 125 cm³ of liquid **B** to make liquid **C**.

Liquid **C** has a density of 1.05 g/cm³

Find the density of liquid **B**.

Give your answer correct to 2 decimal places.

..... g/cm³

(Total for question = 3 marks)

Q5.

Liquid A and liquid B are mixed together in the ratio 2 : 13 by volume to make liquid C.

Liquid A has density 1.21 g/cm^3

Liquid B has density 1.02 g/cm^3

A cylindrical container is filled completely with liquid C.

The cylinder has radius 3 cm and height 25 cm.

Work out the mass of the liquid in the container.

Give your answer correct to 3 significant figures.

You must show all your working.

..... g

(Total for question = 4 marks)

Q6.

Zahra mixes 150g of metal A and 150g of metal B to make 300g of an alloy.

Metal A has a density of 19.3g/cm^3 .

Metal B has a density of 8.9g/cm^3 .

Work out the density of the alloy.

..... cm^3

(Total for question = 4 marks)

Q7.

Jade makes an orange drink by mixing orange concentrate with water.

She mixes 15 cm^3 of orange concentrate with 250 cm^3 of water.

The density of orange concentrate is 1.20 g/cm^3 .

The density of water is 1.00 g/cm^3 .

Work out the density of Jade's orange drink.

Give your answer correct to 2 decimal places.

..... g/cm^3

(Total for question = 3 marks)

Q8.

Ibrar mixes 74 g of lead and 126 g of tin to make 200 g of an alloy.

Lead has a density of 11.34 g/cm³.

Tin has a density of 7.31 g/cm³.

Work out the density of the alloy.

Give your answer correct to 1 decimal place.

..... g/cm³

(Total for question = 3 marks)

Q9.

The densities of two different liquids A and B are in the ratio 19 : 22

The mass of 1 cm³ of liquid B is 1.1 g.

5 cm³ of liquid A is mixed with 15 cm³ of liquid B to make 20 cm³ of liquid C.

Work out the density of liquid C.

.....g/cm³

(Total for question is 4 marks)