GCSE HIGHER · REVISION MAT 2

Speed, density and pressure

1 How far does a car travel in 2.5 hours at 60 km/h?

2 A block has mass 450 g and volume 50 cm^3.

Find its density.

3 Explain why 1 hour 30 minutes is written as 1.5 hours in the speed formula.

4 Ana walks 6 km at 4 km/h, then cycles 18 km at 12 km/h.

Find her total time.

5 A box weighs 120 N.

Its base is 0.4 m by 0.5 m.

Show that it exerts a pressure of 600 N/m^2.

6 Gold has density 19.3 g/cm^3.

A gold bar has mass 2.316 kg.

Find its volume.

7 Show that 45 km/h = 12.5 m/s.

8 Liquid A has density 0.8 g/cm^3 and liquid B 1.2 g/cm^3.

Find the density of a mixture of equal masses.

Mr&Mrs MATHS

ANSWERS · REVISION MAT 2

Speed, density and pressure

1 **150 km**

2 **9 g/cm³**

3 **30 minutes is half an hour.**

4 1.5 + 1.5

3 hours

5 Area 0.2 m²

120 ÷ 0.2 = 600

6 2316 ÷ 19.3

120 cm³

7 45 000 ÷ 3600

= 12.5

8 Use 1 g of each:

volume $\frac{1}{0.8} + \frac{1}{1.2}$

= 2.083 cm³

2 ÷ 2.083 = 0.96 g/cm³

Mr&Mrs MATHS