GCSE FOUNDATION · REVISION MAT 4

Compound units

1 A car travels 285 km in 3 hours.

Work out its average speed.

2 A brass ornament has a mass of 2150 g and a volume of 250 cm^3.

Work out its density.

3 A small pack has 6 eggs and costs £3.30.

A large pack has 10 eggs and costs £5.20.

Show that the larger pack is better value.

4 Hari travels for 20 minutes at 90 km/h.

Hari says the distance travelled is 1,800 km.

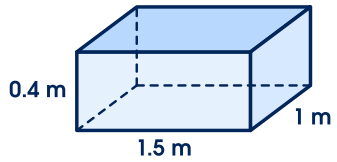
Explain the mistake Hari has made.

5 A train travels 280 km at an average speed of 112 km/h.

It leaves at 7:35.

What time does it arrive?

6 A box is a cuboid. Its weight is 1200 N.



Work out the greatest pressure the box can exert on the floor.
(pressure = force ÷ area)

ANSWERS · REVISION MAT 4

Compound units

1 285 ÷ 3 = **95 km/h**

2 2150 ÷ 250 = **8.6 g/cm^3**

3 Small: £3.30 ÷ 6 = 55p per unit

Large: £5.20 ÷ 10 = 52p per unit

The **larger** pack costs less per unit ✓

4 The speed is per **hour**, so the time must be in hours.

20 min = 0.333333 h

90 × 0.333333 = **30 km**

5 Time = 280 ÷ 112 = 2.5 hours = 2 h 30 min

Arrives at **10:05**

6 Smallest face area = 0.4 m^2

Greatest pressure = 1200 ÷ 0.4 = **3000 N/m^2**