GCSE FOUNDATION · REVISION MAT 5

# Compound units

**1** A car travels 68 km in 0.5 hours.

Work out its average speed.

**2** A glass paperweight has a mass of 960 g and a volume of 120 $cm^3$.

Work out its density.

**3** A small pack has 300 ml of shampoo and costs £1.65.

A large pack has 500 ml of shampoo and costs £2.85.

Show that the smaller pack is better value.

**4** Isla travels for 40 minutes at 75 km/h.

Isla says the distance travelled is 3,000 km.

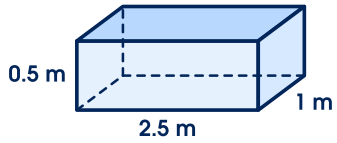
Explain the mistake Isla has made.

**5** A train travels 243 km at an average speed of 81 km/h.

It leaves at 14:10.

What time does it arrive?

**6** A box is a cuboid. Its weight is 750 N.




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

ANSWERS · REVISION MAT 5

# Compound units

**1** 68 ÷ 0.5 = **136 km/h**

**2** 960 ÷ 120 = **8 g/cm$^3$**

**3** Small: £1.65 ÷ 300 = 0.55p per unit

Large: £2.85 ÷ 500 = 0.57p per unit

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

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

40 min = 0.666667 h

75 × 0.666667 = **50 km**

**5** Time = 243 ÷ 81 = 3 hours = 3 h 0 min

Arrives at **17:10**

**6** Smallest face area = 0.5 m$^2$

Greatest pressure = 750 ÷ 0.5 = **1500 N/m$^2$**