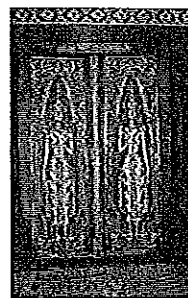# WORKSHEET 3 MEASUREMENT – CHAPTER 14

HOW DO YOU USE AN EGYPTIAN DOORBELL?

**1** Antonio cycled around the Hunter Region. In the first two hours he averaged 20 km/h, but in the second two hours he averaged only 15 km/h. How far did he travel
(a) in the first two hours?
(b) in the second two hours?
(c) altogether in the four hours and hence his average speed?

**2** A fast growing plant grows at a rate of 1.5 cm per week.
(a) How much did it grow in two months?
(b) If it is now 22.5 cm after planting, how old is the plant?

**3** A snail crawls at an average speed of 5 cm/min.
(a) How long would it take to crawl 1 metre?
(b) How far does it crawl in 18 minutes?

**4** A pump is emptying water from a pool at the rate of 60L / min.
(a) How much water has been removed after 30 minutes?
(b) What is the rate L/ h?
(c) How long did it take to empty 4200 L?

**5** (a) Al bought 1.25 kg of mixed nuts. His friends ate 375 g of them. How much was left?
(b) A peppermint weighs 2.5 g, how many mg is this?
(c) The Blue Whale is the biggest whale in the world. It can reach 136 000 kg. How many tonnes is this?

**6** A loaded delivery truck weighed 3.5 tonnes when it left the factory. At its first stop it delivers 420 kg of goods, 265 kg at the second stop and picks up 120 kg on the third stop. What is the weight of the loaded truck now?

**7** Seoul (+8) means it is 8 hours ahead of Greenwich and New York (-5) means that it is 5 hours behind Greenwich. Here are a list of cities and their times.

| | | |
|---|---|---|
| Sydney (+10) | Wellington (+12) | Boston (-5) |
| Singapore (+7) | Moscow (+3) | Perth (+8) |

Calculate the time in the listed city, given the time in another city.
(a) Singapore if Sydney is 10.a.m.
(b) Moscow if Sydney is 2 p.m.
(c) Sydney if Perth is 9 a.m.
(d) Perth if Boston is 8 p.m.

**8** Convert these measurements to the indicated units.
(a) $6\ 000\text{mm}^2 = \ldots \text{cm}^2$           (b) $2\text{ha} = \ldots \text{m}^2$
(c) $450\text{ha} = \ldots \text{km}^2$           (d) $10\ 000\text{cm}^2 = \ldots \text{m}^2$

**9** The capacity of the following object is closest to:

| | | | |
|---|---|---|---|
| (a) can of baked beans | **A** 6mL | **B** 60 mL | **C** 600 mL |
| (b) kettle | **A** 20 mL | **B** 200 mL | **C** 2L |
| (c) bath tub | **A** 20L | **B** 50L | **C** 500L |
| (d) petrol tank of a car | **A** 6L | **B** 60L | **C** 600L |

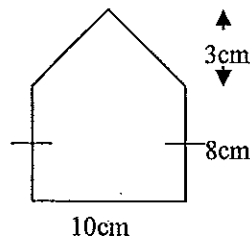**10** The Markovs has 4 people in the household. The average shower per person per day is 70 L of water.

(a) Find total water consumed in kL for 365 days.

(b) If they became conscious of water conservation, they would drop their showers to 55 L per person per day, find the savings in kL.

**11** A rectangular prism has dimensions 6cm by 4cm by 3cm.

(a) Find the total surface area.

(b) Find the volume

**12** A cube has a total surface area of 96cm$^2$. Find its volume.

**13**



3cm

8cm

10cm

Find the area of this composite shape.

Answers:

| A | C | D | E | I | M | N | N |
|---|---|---|---|---|---|---|---|
| 0.875g 136t | 108cm$^2$ 72cm$^3$ | 40km 30km 70km 17.5km/h | 2935kg | 12cm 15 weeks | 60cm$^3$ 20000m$^2$ 4.5km$^2$ 1m$^2$ | 7am 7am 11am 9am | 64cm$^3$ |

| O | O | O | T | T |
|---|---|---|---|---|
| 20min 90min | C C C B | 95cm$^2$ | 1800L 3600L/h 70min | 102.2kL 21.9kL |

| 4 | 9 | 13 | 10 | | 5 | 12 | 1 | | 11 | 3 | 8 | 6 | | 2 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|