Year 8 · Measurement: Volumes, Areas & Time

Name: _____ Date: _____

Hi! This sheet lets you practise converting units, finding areas of parallelograms and trapeziums, working out volumes of prisms, and reading timetables. Take your time and show your working.

Warm-up

1. Convert 5 m² into cm².

2. Find the area of a parallelogram with base 8 cm and height 5 cm.

3. Convert 2.5 L into cm³.

4. Convert 2 hours 45 minutes into minutes.

Practice

5. Find the area of a trapezium with parallel sides a = 6 cm and b = 10 cm, and height h = 4 cm.

6. A triangular prism has a triangular cross-section with base 6 cm and height 4 cm, and a length of 10 cm. Find its volume.

7. A parallelogram has an area of 60 cm² and a height of 5 cm. Find the length of its base.

8. Mereana fills a fish tank shaped like a rectangular prism that is 50 cm long, 30 cm wide and 40 cm high. How many litres of water does it hold when full?

9. The train from New Lynn departs at 7:52 am and arrives at Britomart at 8:29 am. How long is the trip, in minutes?

10. A solid is made of two rectangular prisms. The bottom prism is 10 cm × 6 cm × 4 cm and the top prism is 4 cm × 4 cm × 5 cm. Find the total volume.

Challenge

11. A barn-shaped storage shed is a composite prism 10 m long. The lower part is a rectangular prism 4 m wide and 3 m high. On top sits a triangular prism (the roof) with base 4 m and height 2 m. Find the total volume, then write it in litres.

12. A rainwater tank is a rectangular prism 1.2 m long, 0.8 m wide and 1.5 m high. A pump fills it at 15 L per minute. Starting empty, how long will it take to fill completely? Give your answer in hours and minutes.