Year 6 · Measurement: Measure, Convert and Compare

Name: _____ Date: _____

Kia ora! This sheet helps you measure and estimate, swap between metric units, work out areas and volumes, find missing angles, and read the clock and timetables. Take your time and show your working.

Warm-up

1. Convert 350 cm into metres.

2. Convert 2.5 kg into grams.

3. Two angles sit on a straight line. One is 115°. What is the other?

4. Convert 1500 mL into litres.

Practice

5. A netball court section at Avondale is a rectangle 8 m long and 5 m wide. What is its area?

6. A right-angled triangle has a base of 6 cm and a height of 4 cm. What is its area?

7. A rectangular gift box measures 3 cm by 4 cm by 5 cm. Work out its volume.

8. Mere's backpack holds a drink bottle of 750 g and a lunchbox of 1 kg 250 g. What is the total mass in kilograms?

9. The bus leaves Avondale at 2:53 pm and reaches Britomart at 3:28 pm. How long is the trip?

10. Two straight lines cross. One of the four angles is 70°. Using vertically opposite angles, name the sizes of the other three angles.

Challenge

11. A fish tank is a rectangular prism 40 cm long, 25 cm wide and 30 cm high. (a) What is its volume in cm^3? (b) If 1000 cm^3 holds 1 litre of water, how many litres does the full tank hold?

12. At a point, three angles meet around the centre of a wheel. They measure 145°, x°, and 90°, and together they complete a full turn. Find x. Then say what fraction of a full turn 90° is.

Answer key (for parents and tutors)

1. Convert 350 cm into metres.
   There are 100 cm in 1 m, so divide by 100. 350 ÷ 100 = 3.5 m.

2. Convert 2.5 kg into grams.
   There are 1000 g in 1 kg, so multiply by 1000. 2.5 × 1000 = 2500 g.

3. Two angles sit on a straight line. One is 115°. What is the other?
   Angles on a straight line add to 180°. 180° − 115° = 65°.

4. Convert 1500 mL into litres.
   There are 1000 mL in 1 L, so divide by 1000. 1500 ÷ 1000 = 1.5 L.

5. A netball court section at Avondale is a rectangle 8 m long and 5 m wide. What is its area?
   Area of a rectangle = length × width. 8 m × 5 m = 40 m².

6. A right-angled triangle has a base of 6 cm and a height of 4 cm. What is its area?
   A right-angled triangle is half of a rectangle with the same base and height. Rectangle area = 6 × 4 = 24 cm². Triangle = 24 ÷ 2 = 12 cm².

7. A rectangular gift box measures 3 cm by 4 cm by 5 cm. Work out its volume.
   Volume of a rectangular prism = length × width × height. 3 × 4 × 5 = 60 cm³.

8. Mere's backpack holds a drink bottle of 750 g and a lunchbox of 1 kg 250 g. What is the total mass in kilograms?
   Change 1 kg 250 g to grams: 1250 g. Total = 750 + 1250 = 2000 g. Convert to kilograms: 2000 ÷ 1000 = 2 kg.

9. The bus leaves Avondale at 2:53 pm and reaches Britomart at 3:28 pm. How long is the trip?
   From 2:53 pm to 3:00 pm is 7 minutes. From 3:00 pm to 3:28 pm is 28 minutes. 7 + 28 = 35 minutes.

10. Two straight lines cross. One of the four angles is 70°. Using vertically opposite angles, name the sizes of the other three angles.
    Vertically opposite angles are equal, so the angle directly opposite the 70° is also 70°. The other two angles are on a straight line with the 70°: 180° − 70° = 110° each. So the four angles are 70°, 110°, 70°, 110°.

11. A fish tank is a rectangular prism 40 cm long, 25 cm wide and 30 cm high. (a) What is its volume in cm³? (b) If 1000 cm³ holds 1 litre of water, how many litres does the full tank hold?
    (a) Volume = 40 × 25 × 30. First 40 × 25 = 1000, then 1000 × 30 = 30000 cm³. (b) 30000 ÷ 1000 = 30 litres.

12. At a point, three angles meet around the centre of a wheel. They measure 145°, x°, and 90°, and together they complete a full turn. Find x. Then say what fraction of a full turn 90° is.
    Angles at a point add to 360°. So x = 360 − 145 − 90 = 125°. A full turn is 360°, and 90 ÷ 360 = 1/4, so 90° is one quarter of a full turn.