

Measurement & Conversions

Data & Measurement · Grade 5

Score: _____ / 10

★ Hard · 10 Questions

Solve each problem. Show your work in the space provided. Write your answer on the line.

1. Convert 3.2 km to metres, then to centimetres.

Answer: _____

2. A tank holds 8.5 litres. It is filling at 250 mL per minute.
How many minutes to fill it completely?

Answer: _____

3. Convert 5 feet 9 inches to inches only.

Then convert to centimetres. (1 inch $\approx$ 2.54 cm)

Answer: _____

4. A car travels 90 km/h. Convert this speed to miles per hour.

(1 km $\approx$ 0.621 miles)

Answer: _____

5. A recipe needs 3 cups of flour. Convert to litres.

(1 cup $\approx$ 237 mL)

Answer: _____

6. Convert 0.5 m^2 to cm^2 .

Answer: _____

7. A field is 2.4 hectares. Convert to m^2 . (1 hectare = 10,000 m^2)

Answer: _____

8. Convert 5 gallons to litres. (1 gallon $\approx$ 3.785 litres)

Answer: _____

9. A box has volume 0.72 m^3 . Convert to cm^3 .

Answer: _____

10. A train travels 450 km in 3.75 hours.
Express its speed in metres per second.

Answer: _____

Answer Key

Measurement & Conversions — Hard

1. **3,200 m = 320,000 cm**

$3.2 \times 1,000 = 3,200 \text{ m}$. $3,200 \times 100 = 320,000 \text{ cm}$.

2. **34 minutes**

$8.5 \text{ L} = 8,500 \text{ mL}$. $8,500 \div 250 = 34 \text{ minutes}$.

3. **69 inches = 175.26 cm**

$5 \times 12 + 9 = 69 \text{ inches}$. $69 \times 2.54 = 175.26 \text{ cm}$.

4. **$\approx 55.9 \text{ mph}$**

$90 \times 0.621 = 55.89 \approx 55.9 \text{ mph}$.

5. **0.711 litres**

$3 \times 237 = 711 \text{ mL} = 0.711 \text{ L}$.

6. **5,000 cm²**

$1 \text{ m} = 100 \text{ cm}$. $1 \text{ m}^2 = 100 \times 100 = 10,000 \text{ cm}^2$. $0.5 \text{ m}^2 = 5,000 \text{ cm}^2$.

7. **24,000 m²**

$2.4 \times 10,000 = 24,000 \text{ m}^2$.

8. **$\approx 18.925 \text{ litres}$**

$5 \times 3.785 = 18.925 \text{ litres}$.

9. **720,000 cm³**

$1 \text{ m} = 100 \text{ cm}$. $1 \text{ m}^3 = 100^3 = 1,000,000 \text{ cm}^3$. $0.72 \times 1,000,000 = 720,000 \text{ cm}^3$.

10. **33.3 m/s**

$\text{Speed} = 450 \text{ km} / 3.75 \text{ h} = 120 \text{ km/h}$. Convert: $120 \times 1,000 / 3,600 = 33.3 \text{ m/s}$.