

- 1 How many millimetres are there in a kilometre?
Circle your answer.

[1 mark]

10^3

10^5

10^6

10^9



- 2 Lily's age is 2 years and 4 months.
Hugo's age is 1 year and 8 months.

Write Lily's age in months as a fraction of Hugo's age in months.
Give your fraction in its simplest form.

[2 marks]

$$\text{Lily: } (2 \times 12) + 4 = 28 \text{ months}$$

$$\text{Hugo: } (1 \times 12) + 8 = 20 \text{ months}$$

$$\text{Fraction: } \frac{28 \div 4}{20 \div 4} = \frac{7}{5}$$

Answer $\frac{7}{5}$ (2)

3

A square has an area of 0.25 square metres.

Circle the length, in **centimetres**, of one side of the square.

[1 mark]

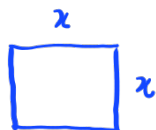
0.5 cm

5 cm

50 cm

①

500 cm



$$x^2 = 0.25 \text{ m}^2$$

$$x = 0.5 \text{ m}$$

$$= 50 \text{ cm}$$

- 4 A factory packs x boxes of teabags per hour.
Each box contains 80 teabags.

Show that the factory packs $\frac{4x}{3}$ teabags per minute.

[2 marks]

$$80 \times x = 80x \quad (1)$$

$$\frac{80x}{1 \text{ hour}} \times \frac{1 \text{ hour}}{60 \text{ mins}} = \frac{80}{60} x \text{ per mins} \quad (1)$$
$$= \frac{4x}{3} \text{ per mins}$$

5

Circle the correct statement.

[1 mark]

$1 \text{ m}^2 = 100 \text{ mm}^2$

$1 \text{ cm}^2 = 100 \text{ mm}^2$

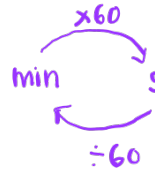
$1 \text{ m}^2 = 100 \text{ cm}^2$

$1 \text{ km}^2 = 100 \text{ m}^2$

6

Concrete from a truck is poured at 10.9 kg **per second** for 30 minutes.

$1000 \text{ kg} = 1 \text{ tonne}$



Is more than 20 tonnes of concrete poured?

Tick a box.

Yes

☐

No

☒
You **must** show your working.**[4 marks]**

$$\text{Concrete poured : } \frac{10.9 \text{ kg}}{1 \text{ s}} \times (30 \times 60) \text{ s}$$

$$= 10.9 \text{ kg s}^{-1} \times 1800 \text{ s}$$

$$= 19\,620 \text{ kg}$$

$$\text{in tonnes : } 19\,620 \text{ kg} \times \frac{1 \text{ tonne}}{1000 \text{ kg}}$$

$$= 19.62 \text{ tonnes, which is less than 20 tonnes.}$$