Sometimes you will be given the conversion to use. Just use the same rule – multiply if you are moving to a smaller unit of measure, divide if you are moving to a larger unit of measure.

WORK**IT!**

A length of wood measures 17 inches. What is its approximate length in centimetres?

1 inch $\approx$ 2.5 cm

$17 \times 2.5 \approx 42.5 \, cm$

> Multiply since the units are smaller.

NAIL**IT!**

$\approx$ means 'is approximately equal to' and is used when the conversion isn't exact.

DO**IT!**

Work out:

a how many seconds you spent doing maths work today

b how long your arm is in metres

c how much you weigh in grams

d the area in m² of a square with sides measuring 10 cm by 10 cm.

SNAP**IT!**

Ratios of lengths, areas and volumes

Line A is a cm and Line B is b cm so their lengths are in the ratio $a : b$

A _____   B _____

Square A is $a \times a = a^2$ cm² and square B is $b \times b = b^2$ cm² so their areas are in the ratio $a^2 : b^2$

A   B

Cube A is $a \times a \times a = a^3$ cm³ and cube B is $b \times b \times b = b^3$ cm³ so their volumes are in the ratio $a^3 : b^3$

A   B

✓ CHECK**IT!**

1 Convert these measurements to the units shown in brackets:

a 3 km (m)

b $1\frac{1}{4}$ hours (mins)

c 1.3 m² (cm²)

d 3520 ml (litres)

e 2 hours (seconds)

f 14 000 g (kg)

2 A clothed baby weighs 4.5 kg. If his clothes weigh 325 g, what is the actual weight of the baby?

3 A bag weighs 5 pounds. What is the weight in kg?

1 kg $\approx$ 2.2 pounds