

Converting Units

KS3 Maths · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

Convert 3.5 km into metres

Step 1 · km → m is big unit to small unit, so multiply

$$1 \text{ km} = 1000 \text{ m}$$

Step 2 · Multiply by 1000

$$3.5 \times 1000 = 3500$$

Answer: 3500 m

Check: Metres are smaller, so there should be more of them ✓

2. Now try one with the steps

Convert 450 g into kilograms

Step 1 · g → kg is small unit to big unit, so divide

Step 2 · Divide by 1000

Answer:

3. Practice

Show your working. The marks tell you how much is expected.

1. Convert 6 cm into millimetres. [1]

2. Convert 4.2 kg into grams. [1]

3. Convert 750 ml into litres. [1]

4. Convert 2.4 km into metres. [1]

5. Convert 35 mm into centimetres. [1]

6. Convert 3.2 tonnes into kilograms. [1]

7. How many minutes are there in $3\frac{1}{4}$ hours? [1]

8. Write 1.35 litres in millilitres. [1]

9. Add 1.2 m and 85 cm. Give your answer in centimetres. [2]

10. Using 5 miles $\approx$ 8 km, about how many kilometres is 25 miles? [1]

11. A recipe from an old cookbook needs 12 ounces of flour. Using 1 ounce $\approx$ 28 g, about how many grams is that? [1]

12. A box has a volume of 2000 cm^3 . How many litres will it hold? [1]

13. Convert 5 m^2 into cm^2 . [2]

14. Convert $40,000 \text{ cm}^2$ into m^2 . [2]

15. A car's fuel tank holds 11 gallons. Using 1 gallon $\approx$ 4.5 litres, about how many litres is that? [1]

16. Convert 0.3 m^3 into cm^3 .

[2]

4. Before you hand it in

3 km = 0.003 m

Smaller units mean more of them. Going from km to m, multiply: $3 \text{ km} = 3000 \text{ m}$. Ask: should the number get bigger or smaller?

1 m² = 100 cm²

A 1 m square is 100 cm by 100 cm, so $1 \text{ m}^2 = 100 \times 100 = 10,000 \text{ cm}^2$. For volume, multiply by 100 three times.

Writing 1 hour 30 minutes as 1.3 hours

30 minutes is half an hour, so 1 hour 30 minutes = 1.5 hours. Divide minutes by 60 to get the decimal part.

Converting 250 cm to 0.25 m

There are 100 cm in a metre (centi means one hundredth), so $250 \text{ cm} = 2.5 \text{ m}$. Only kilo- and milli- use 1000.