MATHEMATICS · GRADES 4-6

Metric unit conversions

Difficulty level: Intermediate

Mathematics: Grades 4-6

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Overview of the concept

This is how you switch between metric units, like turning centimetres into metres when a recipe or a building plan needs the other unit. The metric system is built on tens, so converting is mostly a matter of moving the decimal point, but you still have to know which direction to move it. You use it to read a recipe in grams when the scale shows kilograms, to turn a building plan in centimetres into metres on site, or to compare two measurements that were written in different units.



Rule

To convert between metric units, multiply or divide by how many of the smaller unit make one of the bigger unit. 1 kilometre is 1,000 metres, 1 metre is 100 centimetres, 1 kilogram is 1,000 grams, and 1 litre is 1,000 millilitres.

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Worked examples

EXAMPLE 1

Q Convert 3 m to centimetres.

SOLUTION

1 metre is 100 centimetres, and centimetres are smaller, so there are more of them. Multiply by 100.

3 × 100 = 300

3 m = 300 cm

EXAMPLE 2

Q Convert 2500 mL to litres.

SOLUTION

1000 millilitres make 1 litre, and litres are bigger, so there are fewer of them. Divide by 1000.

2500 ÷ 1000 = 2.5

2500 mL = 2.5 L

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Practice questions

1 **Convert 5 m to cm.**

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2 **Convert 200 cm to m.**

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3 **A race is 4 km long. How many metres is that?**

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4 A trail is 3000 m long. How many kilometres is that?

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5 A bag of flour weighs 2 kg. How many grams is that?

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6 A packet of butter weighs 500 g. How many kilograms is that?

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7 A jug holds 3 L of juice. How many millilitres is that?

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8 A bottle holds 750 mL of water. How many litres is that?

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9 A shelf is 1.5 m long. How many centimetres is that?

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10 **Which is longer?**

1.5 m

140 cm

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ANSWER KEY

1. 500 cm

2. 2 m

3. 4000 m

4. 3 km

5. 2000 g

6. 0.5 kg

7. 3000 mL

8. 0.75 L

9. 150 cm

10. 1.5 m

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