Measurement Mat
Working towards Year 5

Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) for simple units.
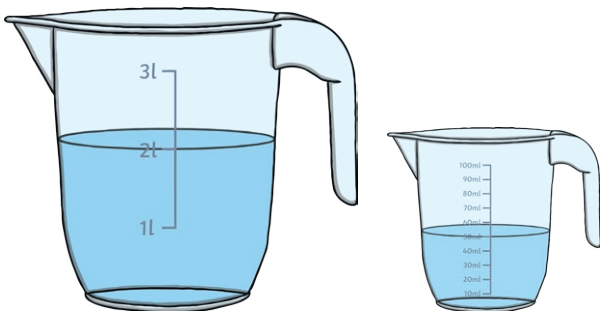
How many centimetres in a metre?

Convert 1kg into grams.

1000ml is how many litres?

How many metres is equivalent to 2km?

Estimate capacity (for example, using water)

Estimate the capacity of a plastic jug by pouring known amounts into the jug.

Solve problems involving converting between units of time using simple units

A train journey takes an hour and a half. How many minutes is this?

A patient is told to rest for 24 hours. How else can this be expressed?

Use all four operations to solve problems involving measure (for example, length, mass, volume, money)
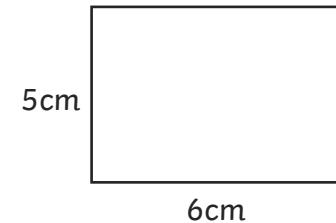
A 1m long ribbon is cut into four equal pieces. How long is each piece in centimetres?

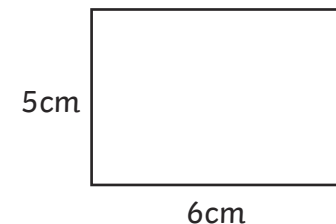A jug fills six glasses with juice. How many glasses will be filled by three jugs?

Measure and calculate the perimeter of composite rectangles in centimetres and metres
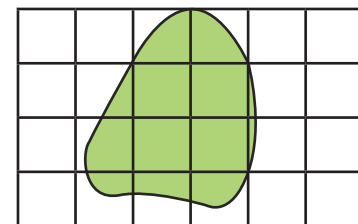
Calculate the perimeter of this rectangle.

5cm

6cm

Calculate and compare the area of simple rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes

What is the area of this rectangle?

5cm

6cm

Estimate the area of this shape.

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Measurement Mat
Expected Year 5

Measures

Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)

How many millimetres in two and a half metres?

Convert 0.56kg into grams.

Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints

1 inch ≈ 2.54cm. How many centimetres in 6 inches?

1 litre ≈ 1.75 pints. How many litres in 7 pints?

Estimate volume [for example, using 1cm³ blocks to build cuboids (including cubes)] and capacity (for example, using water)

Estimate the capacity of a plastic jug.

Estimate the volume of a book using cubes.

Problems

Solve problems involving converting between units of time

The fastest train from Sheffield to London is 123 minutes. How long is this in hours and minutes?

A patient is told to rest for 72 hours. How many days is this?

Use all four operations to solve problems involving measure (for example, length, mass, volume, money) using decimal notation, including scaling.
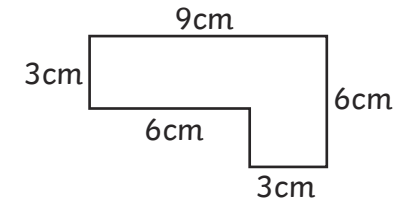
A 1.5m long ribbon is cut into six equal pieces. How long is each piece in centimetres?

A jug fills six glasses with juice. How many jugs will be needed to fill 36 glasses?
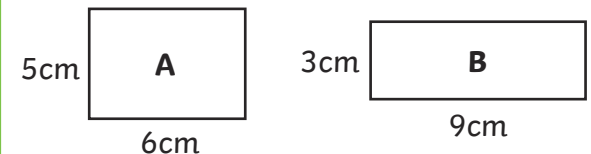
Shape

Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres
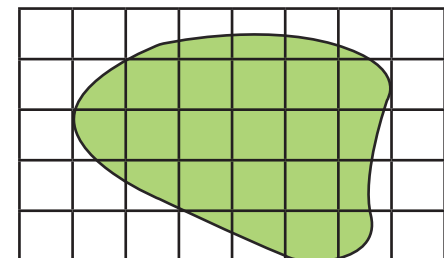
Calculate the perimeter of this rectilinear shape.

9cm
3cm
6cm
6cm
3cm

Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes

Which rectangle has the larger area?

5cm A 6cm

3cm B 9cm

Estimate the area of this shape.

Measurement Mat
Greater Depth Year 5

Measures

Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) using decimals to three places

How many millimetres in two and a quarter metres?

Convert 0.561kg into grams.

Know, understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints

How many centimetres in 9 inches?

A driver wants to put 3 gallons of petrol in a car. How many litres should the driver put in the car?

Estimate volume [for example, using 1cm³ blocks to build cuboids (including cubes)] and capacity (for example, using water)

Explain how to estimate the capacity of a plastic jug with reasonable accuracy.

Explain how to estimate the volume of a box in preparation for posting.

Problems

Solve problems involving converting between units of time

A train leaves Sheffield at 14:49 and arrives in London at 17:13. How long is this in minutes and in hours and minutes?

Explain how to calculate the number of hours in a fortnight.

Use all four operations to solve problems involving measure (or example, length, mass, volume, money) using decimal notation, including scaling.
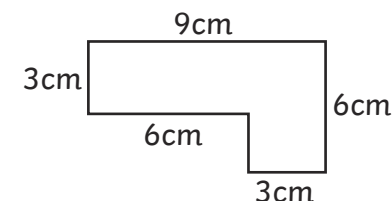
A 1.8m long ribbon is but into six equal pieces. How long is each piece in centimetres?

A jug fills four and a half glasses with juice. There are 20 children attending a party. How many jugs will be needed to ensure all the children can have 2 glasses of juice?

Shape

Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres

Explain why the perimeter can be calculated by doubling 9 + 6.

Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes

Which rectangles with whole centimetre sides have an area of 24cm²?

Explain how you would estimate the area of this shape.