Measurement Mat

Working towards Year 6

Measures

Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to two decimal places

Convert 3.49kg into grams.

3490g

2470m is how many kilometres?

2.47km

How many seconds are there in five minutes?

300 seconds

Convert between miles and kilometres

Use 5 miles = 8km to convert the following:

An athlete runs 10 miles. How many kilometres does the athlete run?

16km

The distance from Sheffield to Manchester is 80km. How many miles is it from Sheffield to Manchester?

50 miles

Problems

Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate

A building brick weighs 2.5g. How many kilograms will 100 bricks weigh?

0.25kg

Some craftsmen measure in millimetres. A room is 4.35m long What is the length of the room in millimetres?

4350mm

Shape

Recognise that rectangles with the same areas can have different perimeters and vice versa

Draw rectangles with the same perimeter and different areas.

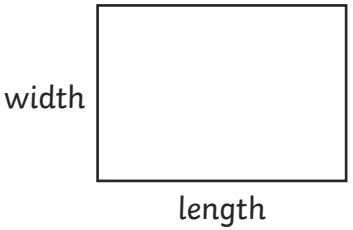
Calculate the area of right-angled triangles

Show how to calculate the area of a triangle, explaining why the area is half that of a rectangle.

Shape

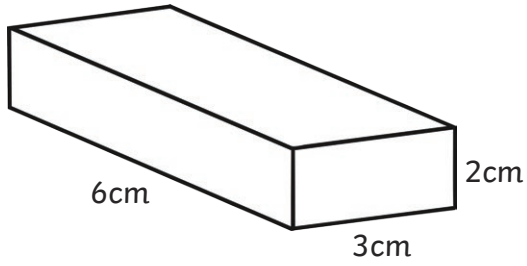
Recognise when it is possible to use formulae for area of shapes

Explain how you would calculate the area of a rectangle.



Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3)

Calculate the volume of this cuboid:



Volume = 36cm^3

Measurement Mat

Expected Year 6

Measures

Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places

Convert 3.49kg into grams.

3490g

12 475m is how many kilometres?

12.475km

How many seconds are there in one hour?

3600 seconds

Convert between miles and kilometres

Use 5 miles = 8km to convert the following:

An athlete runs 25 miles. How many kilometres does the athlete run?

40km

The distance from London to Sheffield is 268km. How many miles is it from London to Sheffield?

167.5 miles

Problems

Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate

A building brick weighs 2.5g. How many kilograms will 150 bricks weigh?

0.375kg

Some craftsmen measure in millimetres. A room is 4.352m long and 2.126m wide. What is the perimeter of the room in millimetres?

12 956mm

Shape

Recognise that shapes with the same areas can have different perimeters and vice versa

Draw two rectilinear shapes with the same perimeter and different areas.

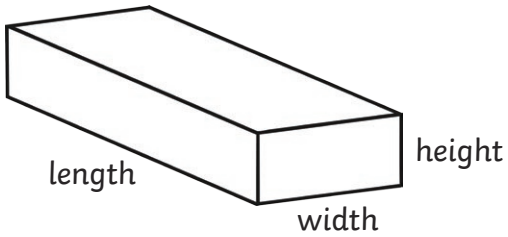
Calculate the area of parallelograms and triangles

Show how to calculate the area of a triangle, explaining why the method works.

Shape

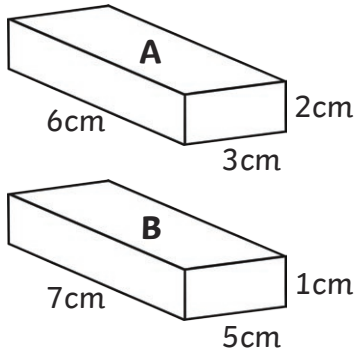
Recognise when it is possible to use formulae for area and volume of shapes

Explain how you would calculate the volume of a cuboid.



Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units (for example, mm^3 and km^3)

Compare the volume of these cuboids:



Volume A > Volume B

Measurement Mat

Greater Depth Year 6

Measures

Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places

How many grams in half of 3.492kg?

1746g

Convert 45m into kilometres, centimetres and millimetres.

How long would be 1.2 hours?

Convert between miles and kilometres

A marathon is 26.2 miles. How many kilometres is a marathon?

The distance from London to New York is 5585km. How many miles is it from London to New York?

Problems

Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate

A building brick weighs 2.5g. A wheel weighs the same as eight bricks. How much will a car made of 86 bricks and 4 wheels weigh?

A length of wood 3.75m long is cut into three lengths, each measuring whole centimetres. The longest is 35cm longer than the shortest. What is the longest possible length of the medium-sized piece?

136cm or 1.36m

Working in centimetres the shortest piece is x. Therefore, the longest is x + 35, and the medium-sized piece is x + 34 (as it must be 1cm shorter to be the longest possible).

x + x + 34 + x + 35 = 375

3x + 69 = 375

Shape

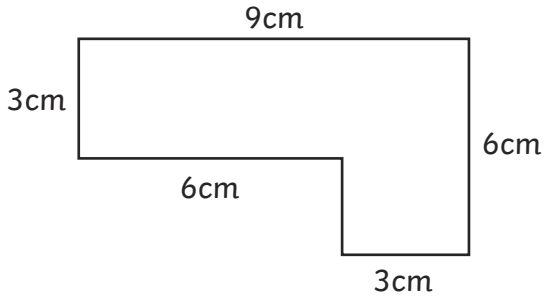
Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units (for example, mm^3 and km^3)

Find three cuboids with whole centimetre dimensions with a volume of $48cm^3$.

Shape

Recognise when it is possible to use formulae for area and volume of shapes

Explain different ways of calculating the area of this rectilinear shape.



Recognise that shapes with the same areas can have different perimeters and vice versa

Explain why 2 rectangles with the same area can have different perimeters.

Calculate the area of parallelograms and triangles

Show how to calculate the area of a parallelogram, explaining why the method works.