

Measurement Primary 4 (first level)

- ordering real life objects according to size and weight

Which of these is likely to weigh more than 1 kilogram?

P4 strength



A: 2 apples



B: 2 grapes



C: 2 melons



D: 2 plums

Answer: _____

Which of these is most likely to weigh 5 kilograms?

P4 strength



A



B



C



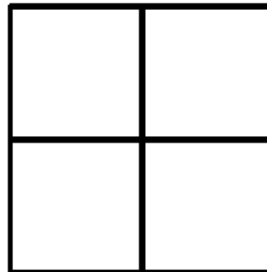
D

- Practical tasks in measuring and using appropriate units

SSLN 2011 Numeracy questions exemplifying learners' strengths and areas for improvement in numeracy organisers which were identified as requiring further development

- **Understanding of the concept of a fraction and using common fractions to represent parts of a whole**
- **Understanding how groups of items can be shared equally**

Shade three quarters of the shape



P4 strength

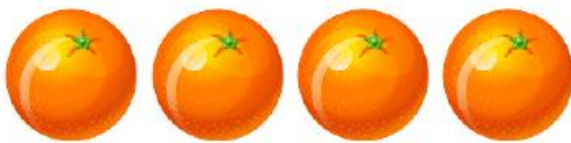
Cross out (x) half of these shapes

P4 strength



Kelly cuts all of these oranges into quarters.

P4 strength



How many quarters does she have altogether?

- | | | |
|---|----|----------------------|
| A | 4 | <input type="text"/> |
| B | 8 | <input type="text"/> |
| C | 12 | <input type="text"/> |
| D | 16 | <input type="text"/> |

Find $\frac{1}{8}$ of the following.

P4 strength



- I can find a fraction of an amount by applying my knowledge of division
- Understanding of the concept and notation of fractions

A baker drops a box of 15 eggs.

P4 area for improvement

$\frac{1}{3}$ of the eggs break.

How many of the eggs break?

Answer: _____ eggs

Jack buys 55 plants for his garden.

P4 area for improvement

$\frac{1}{5}$ of them are violets.

How many violets does Jack buy?

Answer: _____ violets

There are 51 pupils in Primary 7 at Beach Primary School.

P4 area for improvement

$\frac{1}{3}$ of them can swim.

How many of the Primary 7 pupils can swim?

Answer: _____ pupils

84 pupils are taking part in the school's sports day.

P4 area for improvement

$\frac{1}{6}$ of them are competing in the long jump.

How many pupils are taking part in the long jump?

Answer: _____ pupils

The car park has 90 spaces.

P4 area for improvement

$\frac{1}{10}$ of the spaces are for disabled drivers.

How many spaces are for disabled drivers?

Answer: _____ spaces

- **Unitary fraction of an amount within a simple work problem**
- **Finding equivalent fraction, decimal fractions and percentages and using the preferred form in solving problems**
- **I can show the equivalent forms of simple fractions, decimal fractions and percentages**

Find $\frac{1}{7}$ of 630g.

P7 strength

Answer: _____

Find 10% of 630g.

P7 strength

Answer: _____

SSLN 2011 Numeracy questions exemplifying learners' strengths and areas for improvement in numeracy organisers which were identified as requiring further development

Which of the following numbers are less than $\frac{2}{10}$?			P7 strength
A	0.18	<input type="checkbox"/>	
B	0.208	<input type="checkbox"/>	
C	0.2	<input type="checkbox"/>	
D	0.02	<input type="checkbox"/>	

- Understanding and using inverse relationships of adding, subtracting, multiplying and dividing when simplifying calculations and solving problems
- Carry out the necessary calculations to solve related problems

The vet treated 120 animals last week.	P7 area for improvement
$\frac{9}{10}$ of the animals were rabbits	
How many rabbits did the vet treat last week?	
Answer: _____ rabbits	

A school has a role of 588 pupils.	P7 area for improvement
$\frac{3}{7}$ of them are boys.	
How many boys are there?	
Answer: _____ boys	

- Finding an amount of a fraction using common fractions
- Carrying out calculations involving common percentages e.g. 10%, 25%, 50% within simple word problems
- Using equivalent forms of simple fractions and percentages e.g. $75\% = \frac{3}{4}$
- Increasing or decreasing proportionally quantities within straightforward contexts
- Carrying out calculations with decimal fractions (just over half can do this accurately)

SSLN 2011 Numeracy questions exemplifying learners' strengths and areas for improvement in numeracy organisers which were identified as requiring further development

Find $\frac{1}{7}$ of 630g.

S2 strength

Answer: _____

- **Carrying out calculations with a wide range of fractions, decimal fractions and percentages**
- **Understanding the relationship between simple proportion and ratio and using these concepts to solve problems in context**

30 litres of water are mixed with 5 litres of orange juice to make an orange drink.

S2 areas for improvement

Work out the ratio of water to orange concentrate.

Write the ratio in its simplest form.

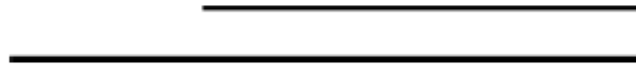
Answer: _____

- ordering real life objects according to size and weight (areas of strength)

How much longer is line B than line A?

P4 strength

Answer: _____ cm

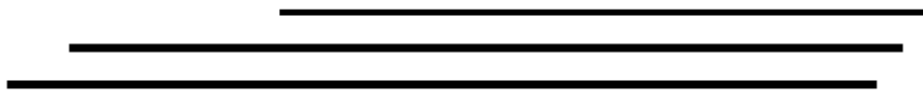


Use a ruler to measure these lines

P4 strength

What is the length of the longest line?

Answer _____ cm

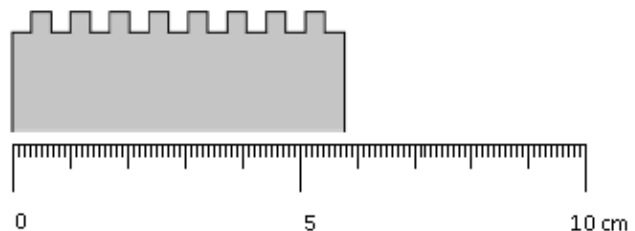


Some of the numbers are missing from this ruler.

P4 strength

What is the length of this toy brick to the nearest centimetre?

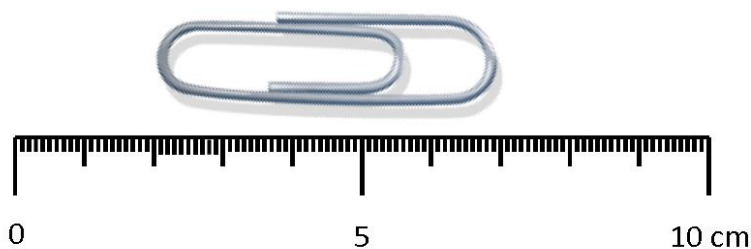
Answer _____ cm



- Practical tasks in measuring and using appropriate unit (areas of improvement)

What is the length of this paper clip to the nearest centimetre?

P4 area for improvement

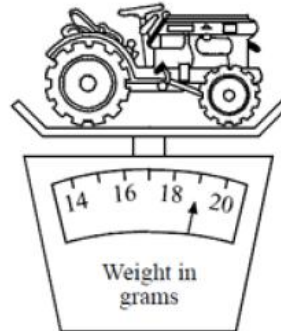


Answer: _____ cm

- **Choosing appropriate units of measure/using scales (areas of strength)**

What does this toy tractor weigh?

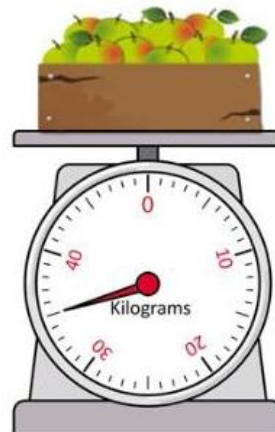
P4 strength



Answer: _____ grams

A box of apples is put on a scale.
What did the box of apples weigh?

P4 strength



Answer: _____ kg

- **Choosing appropriate units of measure/using scales (areas of improvement)**

How much do these apples weigh?

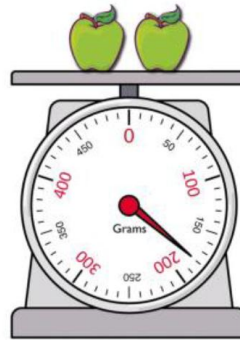
P4 area for improvement

A 153g

B 150g

C 180g

D 190g

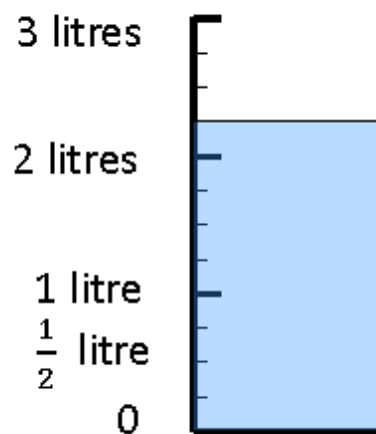


Jill pours milk into a measuring jug.

P4 area for improvement

How much milk is in the jug?

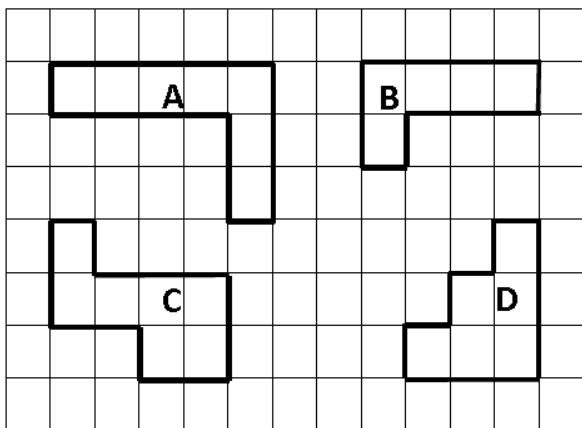
Answer: _____ litres



- **Estimating the area of a shape by counting squares or other methods (areas of strength)**

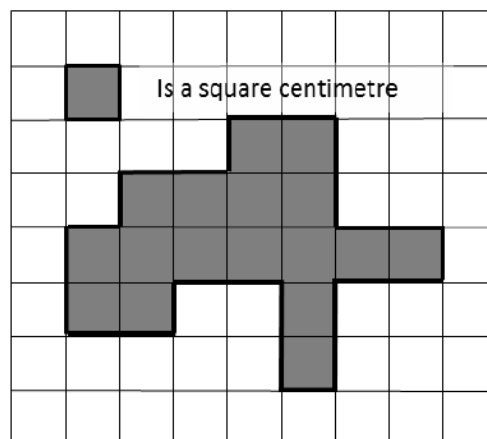
Circle the letters in the two shapes that have the same area.

P4 strength



What is the area of the shaded shape?

P4 strength



Answer: _____ square centimetres

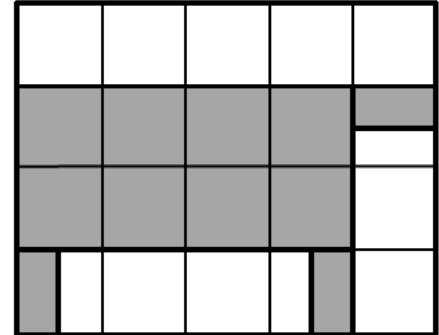
- **Estimating the area of a shape by counting squares or other methods (areas of strength)**

Each square has an area of 1 square centimetre.

P4 area for improvement

What is the area of the shaded shape?

Answer: _____ square centimetres

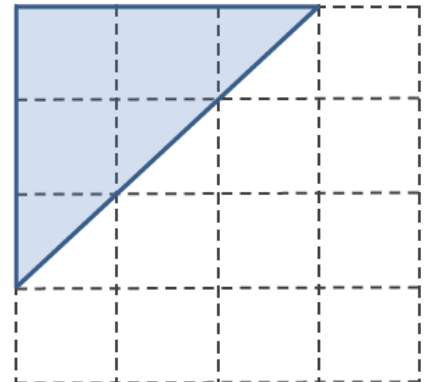


Donald draws a triangle on a grid.

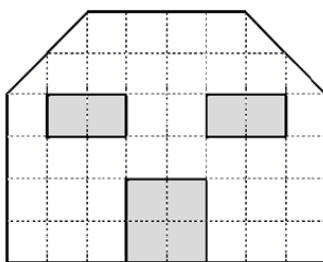
P4 area for improvement


What is the area of the triangle?
Each square = 1 square centimetre.

Answer _____ cm²



Mal makes this shape in card. The house is white and the doors and windows are red.



 = 1 square cm

P4 area for improvement

What area is white?

Answer: _____ square centimetre

- **Estimating an amount an object holds. (areas for improvement)**

The jug contains orange juice.

P4 area for improvement

Estimate how many mugs can be filled with juice from the jug.



A 2 ☐

B 4 ☐

C 8 ☐

D 12 ☐

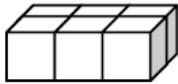
Measurement Primary 7 (second level)

- Different methods to find the volume of a simple 3D object. (areas of strength)

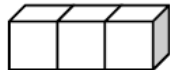
P7 strength

Which two blocks have the same volume as D?

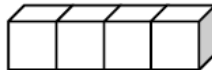
A



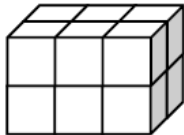
B



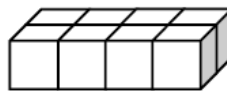
C



D



E



Answer: _____ and _____

- Different methods to find the volume of a simple 3D object. (areas of improvement)

P7 area for improvement

Box B is twice as long, twice as wide and twice as high as Box A

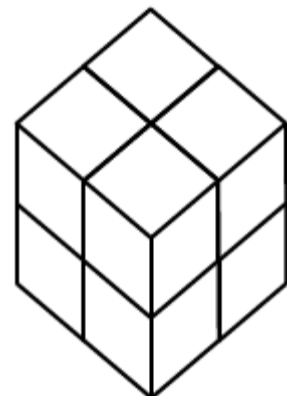
Box A holds 1 kilogram of tea.

How much will box B hold?

Box A



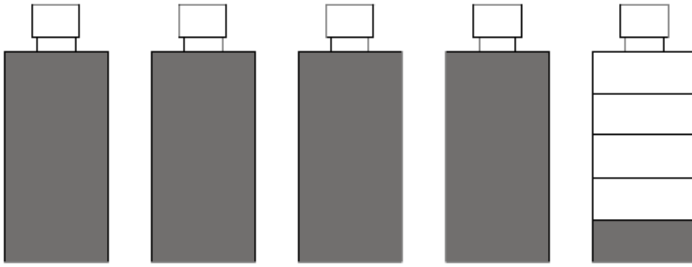
Box B



Answer: _____ kilograms

A full bottle holds 1 litre of water.

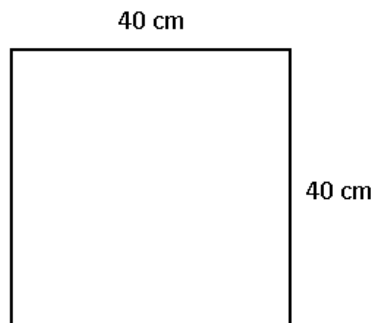
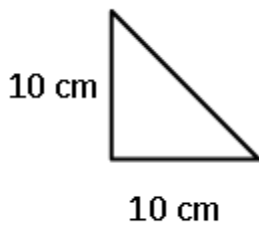
P7 area for improvement



How many 200ml containers can be filled from these bottles?

Answer: _____

How many of these triangular tiles would you need to tile an area 40cm long and 40 cm wide?

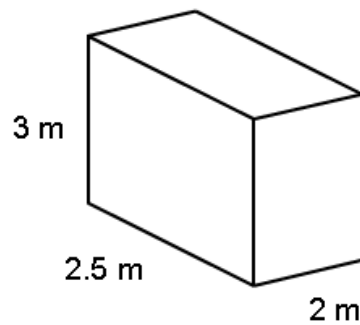


- A 4 ☐
- B 8 ☐
- C 16 ☐
- D 32 ☐

P7 area for improvement

A new television arrives in a box which is 2m wide, 2.5m deep and 3m tall.

What is the volume of the box?

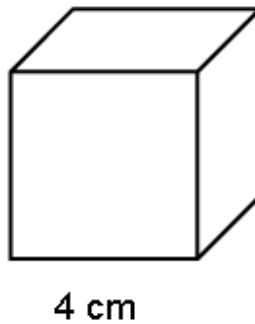


Answer: _____m³

P7 area for improvement

Each side of a cube has the length 4cm.

Calculate the volume of the cube.



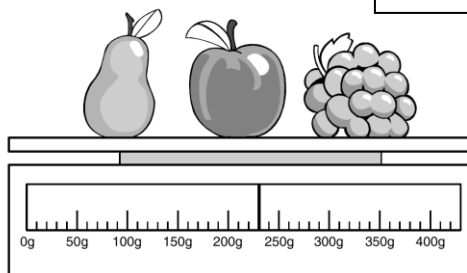
Answer: _____cm³

P7 area for improvement

- Using common units of measure and converting between related units of the metric system.

What is the total weight of the fruit?

P7 area for improvement



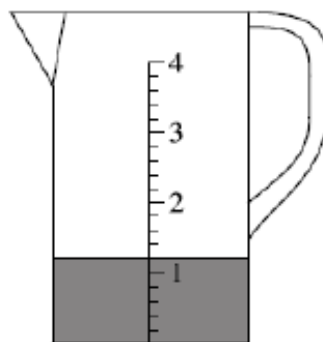
Answer: _____ g

This jug has some diluting juice in it.

P7 area for improvement

Liam adds water to make 2 litres of juice.

How much water did Liam add?



Answer: _____ litres _____ ml

A jug holds $1 \frac{3}{4}$ litres of water.

P7 area for improvement

How many millilitres is this?

Answer: _____ ml

A piece of rope measures 3.745metres.

P7 area for improvement

How many centimetres is this?

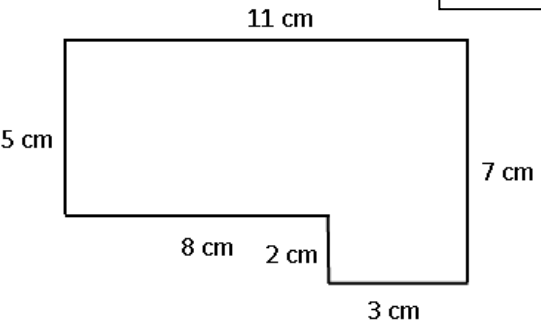
Answer: _____ cm

- Find the perimeter and area of a simple 2D shape (strengths)

P7 strength

Calculate the perimeter of this shape.

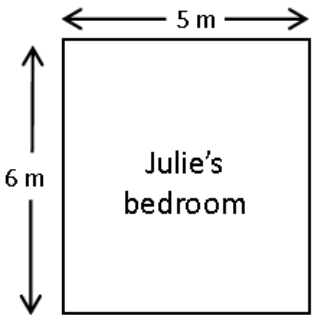
Answer: _____ cm



P7 strength

What is the perimeter of Julie's room?

Answer: _____ m

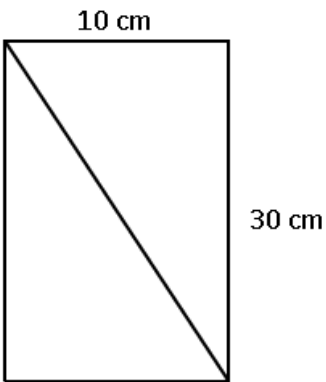


- Find the perimeter and area of a simple 2D shape (areas for improvement)

A rectangle is cut into two triangles.

What is the area of one triangle?

Answer: _____ cm²



P7 area for improvement

P7 area for improvement

A rectangle is 30cm long and 10cm wide.

What is the area of the rectangle?

Answer: _____ cm²

Reflective question:

Why do children provide an answer of 40cm² or 80cm²?

What is the area of this square?

7 cm



Answer: _____ cm²

P7 area for improvement

Reflection point:

Less than 1/3 of pupils could answer this type of question correctly

Each edge of a cube measures 8cm.

Each face of the cube is to be painted white.

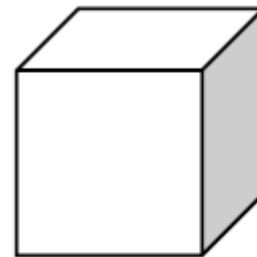
Which calculation gives the area to be painted white in square cm
Tick one box

A 6 x 8 ☐

B 8 x 8 ☐

C 6 X 8 X 8 ☐

D 8 X 8 X 8 ☐



P7 area for improvement

Measurement S2 (third level)

- Using common units of measure and converting between related units of the metric system.

MNU 2-11b



- Choosing the appropriate units and degree of accuracy for the task

MNU 3-11a

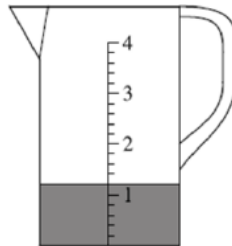
Converting between related units

S2 strength

Choosing appropriate units and carrying out calculations with a wider range of numbers including fractions and decimal fractions (area of improvement)

This jug can hold 4 litres of liquid.

$1 \frac{3}{4}$ litres are added to the liquid already in the jug.



How much liquid is in the jug?
Give your answer as a **decimal fraction**.

Answer: _____ litres

S2 area for improvement

Subtract 93.5grams from 1.656kg.

Give your answer in grams.

Answer: _____ grams

S2 area for improvement

A leaking tap drips 2500ml of water every hour.

How much water is leaked in one day? Give your answer in **litres**.

Answer: _____ litres

S2 area for improvement

7 $\frac{1}{4}$ m of curtain material is cut from a roll of fabric.

S2 area for improvement

The roll has 10m 4cm on it.

After the cut has been made, what length of material will still be left on the roll?

Answer: _____ m _____ cm

- Find the perimeter and area of a simple 2 D shape [MNU 2-11c](#)



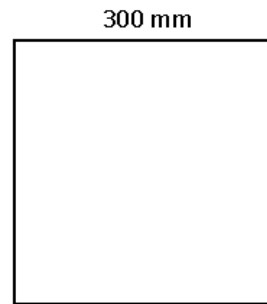
- Use a formula to calculate area or volume when required [MNU 3-11a](#)
- Find the area of compound 2D shapes and volume of 3D objects [MNU 3-11b](#)

Perimeter of 2D shapes (strength)

Allan made a square picture frame at school.

What is the perimeter of the frame?

Answer: _____ mm



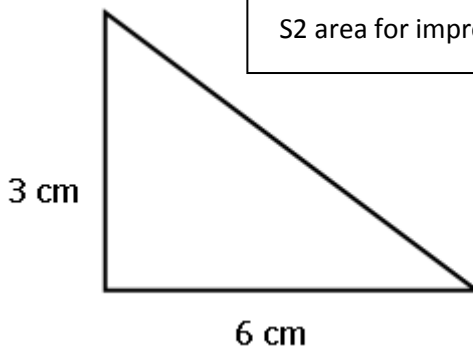
300 mm

S2 strength

Find the area of a simple 2D shape or volume of a simple 3D object

Calculate the area of this right –angled triangle.

Answer: _____ cm²



3 cm

6 cm

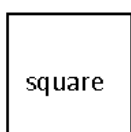
S2 area for improvement

Reflection point:
Just over 1/3 of young people answered this type of question correctly.

Measurement tasks involving numeracy skills: working backwards (inverse operations)

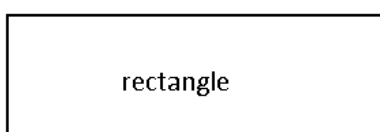
The two shapes below have the same perimeter.

What is the breadth of the rectangle?



square

10 cm



rectangle

14 cm

Answer: _____ cm

S2 area for improvement

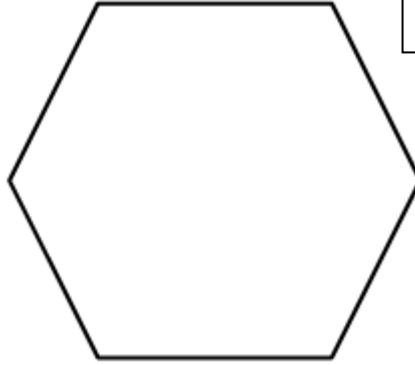
Note: The diagrams are not to scale.

Abdul's father is building a pond in his garden.

The shape of the pond is a regular hexagon.

The perimeter of the pond is 7.5 metres.

What is the length of one side?

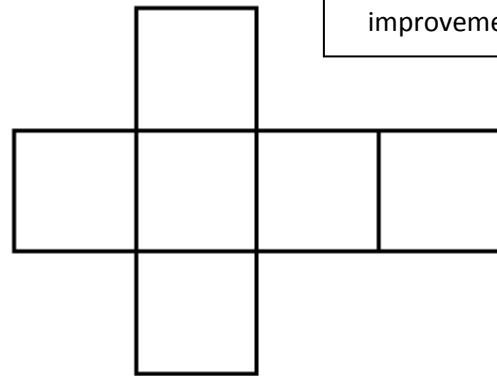


S2 area for
improvement

Answer: _____ m

The diagram shows a piece of card. The area of the card is 96cm^2 .

It can be folded to make a cube.



S2 area for
improvement

What would be the length of one edge of this cube?

Answer: _____ cm

A cube has a volume of 125m^3 .

What is the length of one side of the cube?

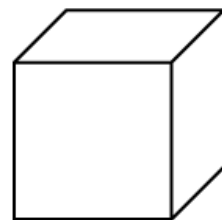
S2 area for improvement

Answer: _____ metres

The length of a rectangular field is 8 metres more than **twice** its width.

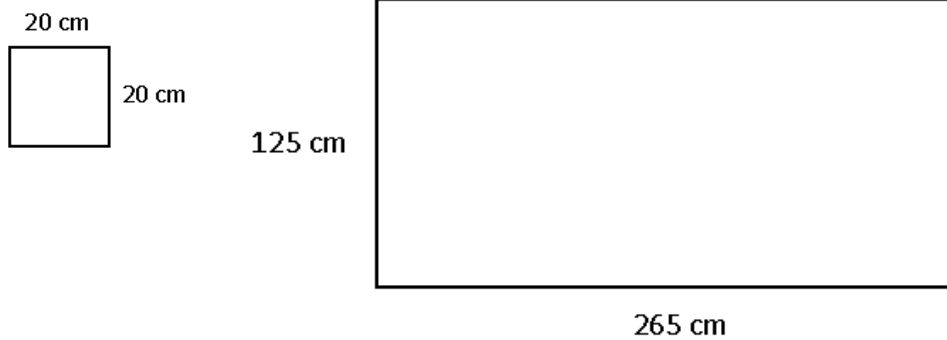
If the field is 40 metres wide, what is the perimeter?

Answer: _____ metres



S2 area for improvement

Paul is tiling part of a kitchen wall. The area to be tiled is 265cm long and 125 cm high.



How many 20cm square tiles are needed to tile this area?

Answer: _____ tiles

S2 area for improvement

How many centimetre cubes will fit into a cube of side 10cm?

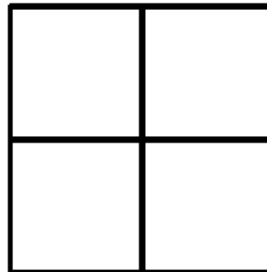
Answer: _____

S2 area for improvement

SSLN 2011 Numeracy questions exemplifying learners' strengths and areas for improvement in numeracy organisers which were identified as requiring further development

- **Understanding of the concept of a fraction and using common fractions to represent parts of a whole**
- **Understanding how groups of items can be shared equally**

Shade three quarters of the shape



P4 strength

Cross out (x) half of these shapes

P4 strength



Kelly cuts all of these oranges into quarters.

P4 strength



How many quarters does she have altogether?

- | | | |
|---|----|----------------------|
| A | 4 | <input type="text"/> |
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| C | 12 | <input type="text"/> |
| D | 16 | <input type="text"/> |

Find $\frac{1}{8}$ of the following.

P4 strength



- I can find a fraction of an amount by applying my knowledge of division
- Understanding of the concept and notation of fractions

A baker drops a box of 15 eggs.

P4 area for improvement

$\frac{1}{3}$ of the eggs break.

How many of the eggs break?

Answer: _____ eggs

Jack buys 55 plants for his garden.

P4 area for improvement

$\frac{1}{5}$ of them are violets.

How many violets does Jack buy?

Answer: _____ violets

There are 51 pupils in Primary 7 at Beach Primary School.

P4 area for improvement

$\frac{1}{3}$ of them can swim.

How many of the Primary 7 pupils can swim?

Answer: _____ pupils

84 pupils are taking part in the school's sports day.

P4 area for improvement

$\frac{1}{6}$ of them are competing in the long jump.

How many pupils are taking part in the long jump?

Answer: _____ pupils

The car park has 90 spaces.

P4 area for improvement

$\frac{1}{10}$ of the spaces are for disabled drivers.

How many spaces are for disabled drivers?

Answer: _____ spaces

- **Unitary fraction of an amount within a simple work problem**
- **Finding equivalent fraction, decimal fractions and percentages and using the preferred form in solving problems**
- **I can show the equivalent forms of simple fractions, decimal fractions and percentages**

Find $\frac{1}{7}$ of 630g.

P7 strength

Answer: _____

Find 10% of 630g.

P7 strength

Answer: _____

SSLN 2011 Numeracy questions exemplifying learners' strengths and areas for improvement in numeracy organisers which were identified as requiring further development

Which of the following numbers are less than $\frac{2}{10}$?			P7 strength
A	0.18	<input type="text"/>	
B	0.208	<input type="text"/>	
C	0.2	<input type="text"/>	
D	0.02	<input type="text"/>	

- Understanding and using inverse relationships of adding, subtracting, multiplying and dividing when simplifying calculations and solving problems
- Carry out the necessary calculations to solve related problems

The vet treated 120 animals last week.	P7 area for improvement
$\frac{9}{10}$ of the animals were rabbits	
How many rabbits did the vet treat last week?	
Answer: _____ rabbits	

A school has a role of 588 pupils.	P7 area for improvement
$\frac{3}{7}$ of them are boys.	
How many boys are there?	
Answer: _____ boys	

- Finding an amount of a fraction using common fractions
- Carrying out calculations involving common percentages e.g. 10%, 25%, 50% within simple word problems
- Using equivalent forms of simple fractions and percentages e.g. $75\% = \frac{3}{4}$
- Increasing or decreasing proportionally quantities within straightforward contexts
- Carrying out calculations with decimal fractions (just over half can do this accurately)

SSLN 2011 Numeracy questions exemplifying learners' strengths and areas for improvement in numeracy organisers which were identified as requiring further development

Find $\frac{1}{7}$ of 630g.

S2 strength

Answer: _____

- **Carrying out calculations with a wide range of fractions, decimal fractions and percentages**
- **Understanding the relationship between simple proportion and ratio and using these concepts to solve problems in context**

30 litres of water are mixed with 5 litres of orange juice to make an orange drink.

S2 areas for improvement

Work out the ratio of water to orange concentrate.

Write the ratio in its simplest form.

Answer: _____