Monday 18th May 2020

L.O. – To calculate angles around a point.

*Parents – Please note that the answers for most problems will be shown on the next slide. Please get your children to answer these prior to moving to next slide.

There is also a Parents Only answer sheet for the daily worksheets.

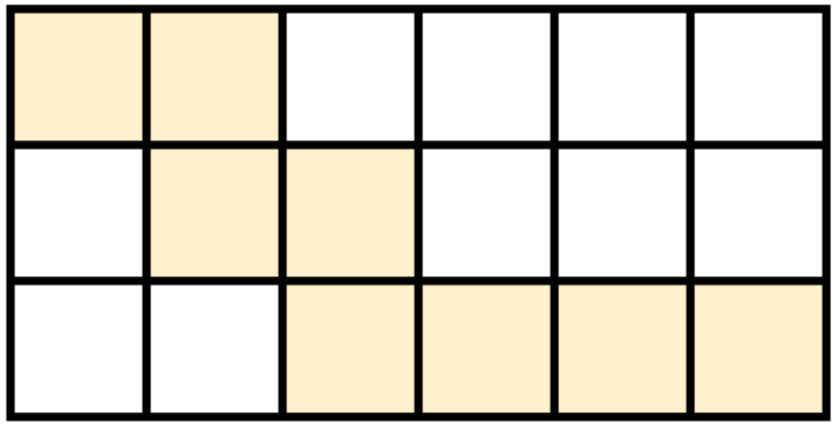
If you could also send in the one completed worksheet.

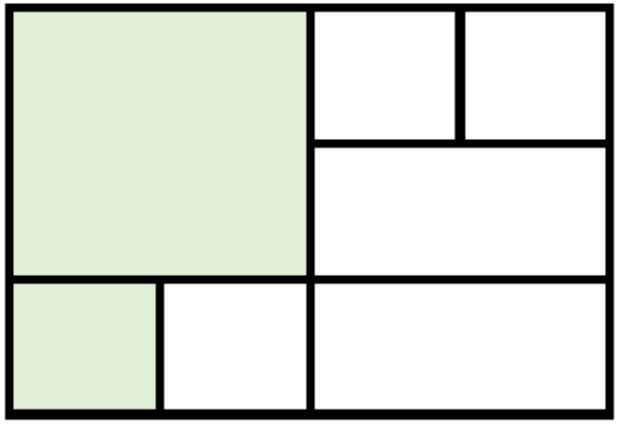
Your teacher would love to see some great work.

Problems of the day.

Hit space bar for answers but don't do it until you've tried!

1 What fraction of each rectangle is shaded?





2 Work out the following fraction calculations.

(a) $\frac{3}{6} + \frac{1}{2}$

(b) $\frac{2}{5} + \frac{7}{15} + \frac{3}{5} + \frac{8}{15}$

(c) $1 - \frac{1}{5} - \frac{3}{10}$

Problems of the day.

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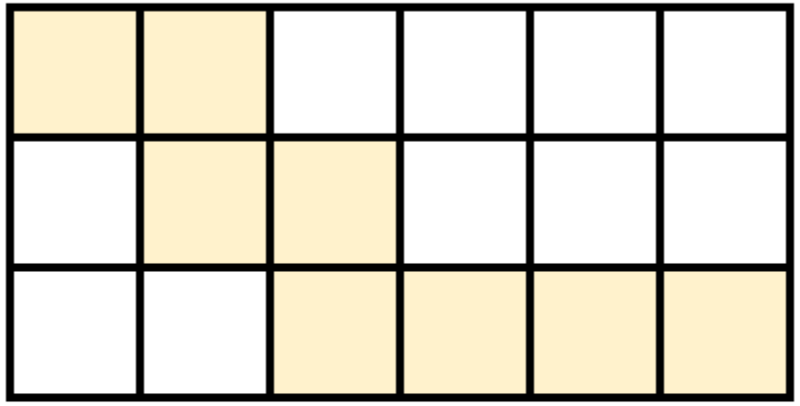
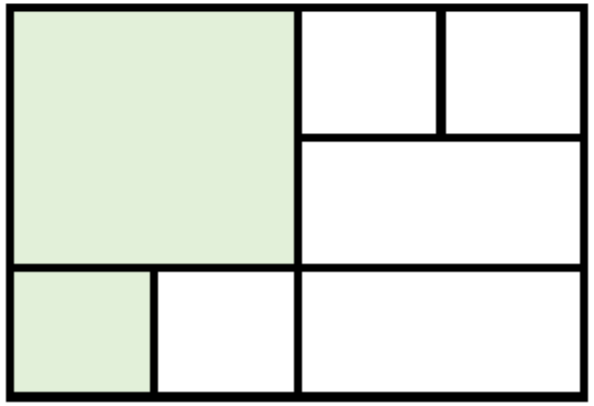


$\frac{8}{18}$ or $\frac{4}{9}$



$\frac{5}{12}$

2 Work out the following fraction calculations.

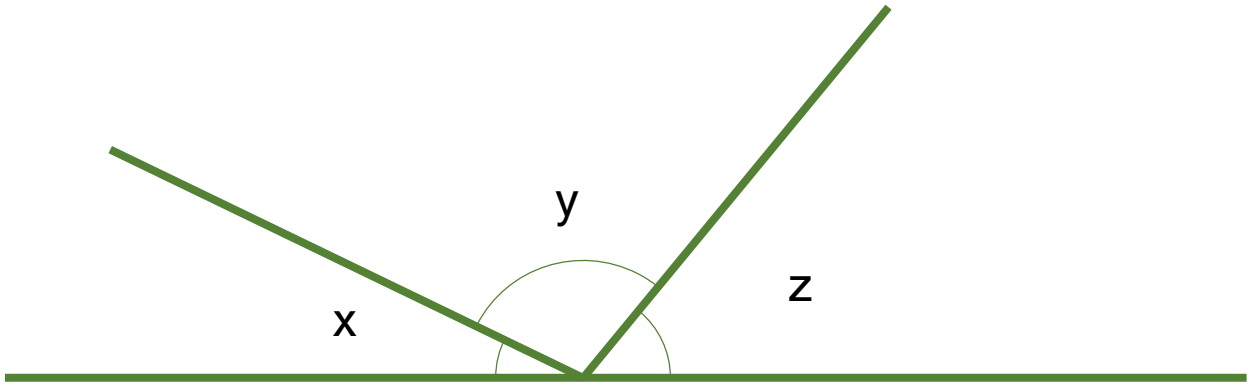
(a) $\frac{3}{6} + \frac{1}{2} = 1$

(b) $\frac{2}{5} + \frac{7}{15} + \frac{3}{5} + \frac{8}{15} = 2$

(c) $1 - \frac{1}{5} - \frac{3}{10} = \frac{1}{2}$

Straight Line

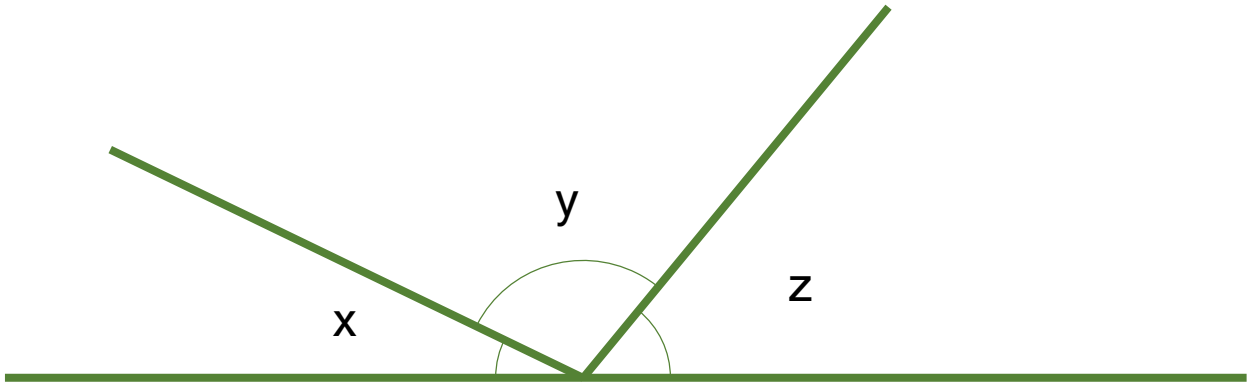
- Write a formula for calculating the size of angle z, using known angles x and y.



HINT – Remember you need to know about angles on a straight line. If you have any issues here please go to Education City and get a refresher.

Straight Line

- Write a formula for calculating the size of angle z, using known angles x and y.



HINT – Remember you need to know about angles on a straight line. If you have any issues here please go to Education City and get a refresher.

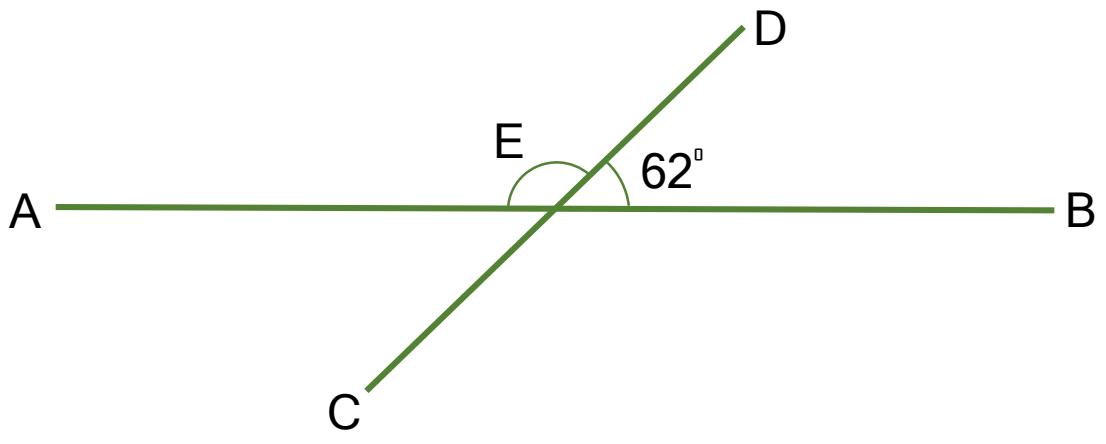
$$z = 180^\circ - x - y$$

or

$$z = 180^\circ - (x + y)$$

Intersecting Lines

- Halim says that the angles E and 62˚ add up to 180˚.
  - Explain what you think about this statement.



Intersecting Lines

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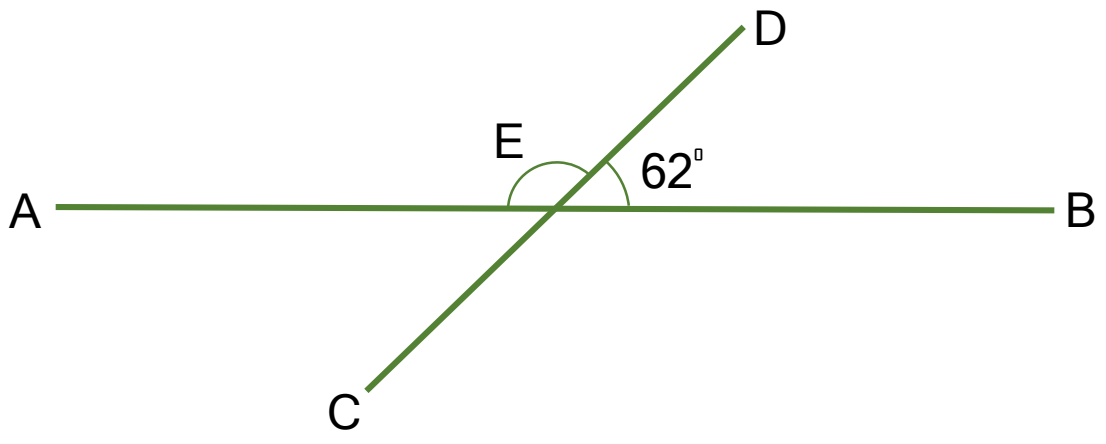
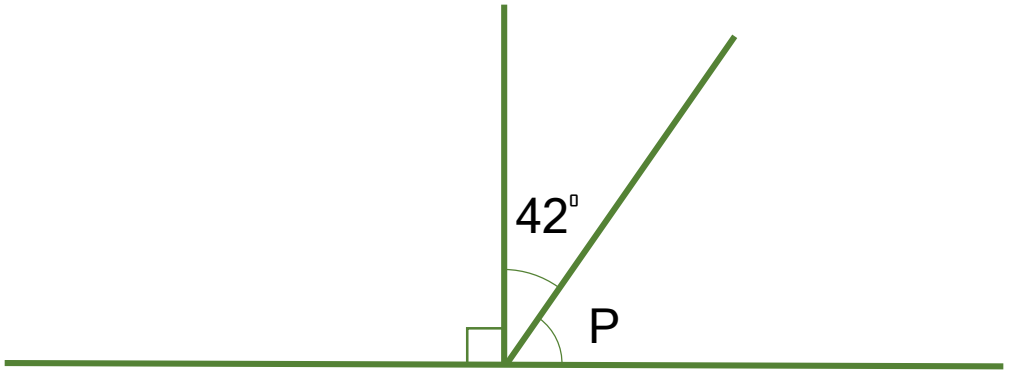


Line AB is horizontal, so angle E = 180° – 62°. So angle E = 118°

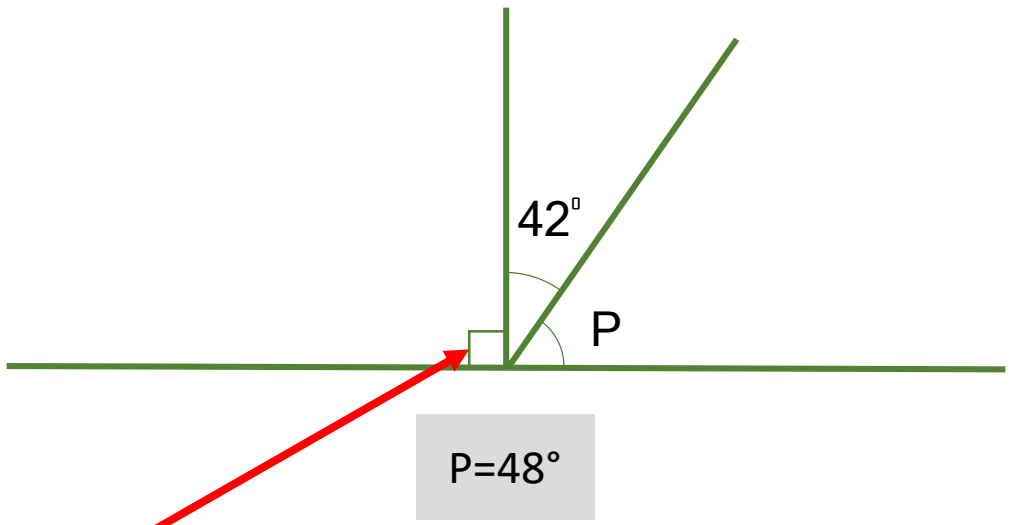
Calculate

- Calculate the missing angle.



Calculate

- Calculate the missing angle.



Remember -

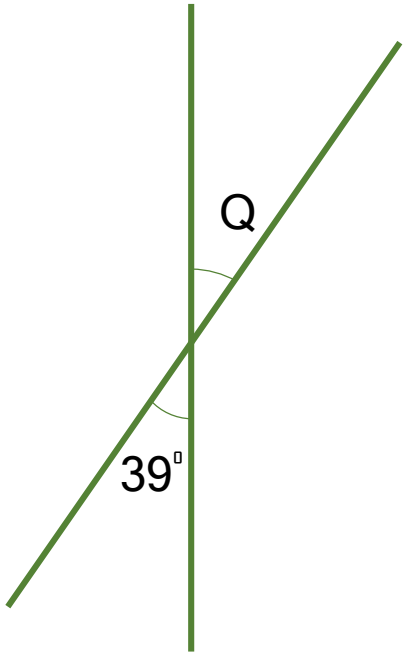
- The squares in the corners represent 90°.

180° - 28° - 90° = 48°

Calculate

- Calculate the missing angle.

HINT – You need to know about opposite angles around a point. If you have any issues here please go to Education City and get a refresher.

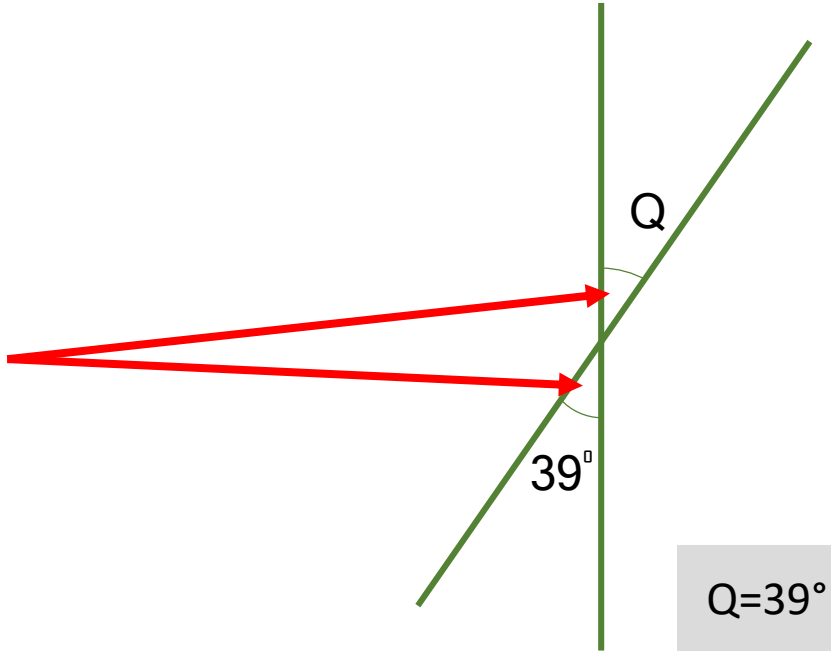


Calculate

- Calculate the missing angle.

Remember -

- The angles that are opposite each other where two straight lines cross match each other.



Q=39°

Tasks

Complete –

- Worksheet.

If you have any misunderstandings then please head to Education City or email the school on –

learning@wembleyprimary.brent.sch.uk

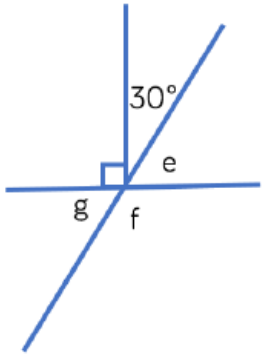
Worksheet

There are five equal angles around a point.

What is the size of each angle?

Explain how you know.

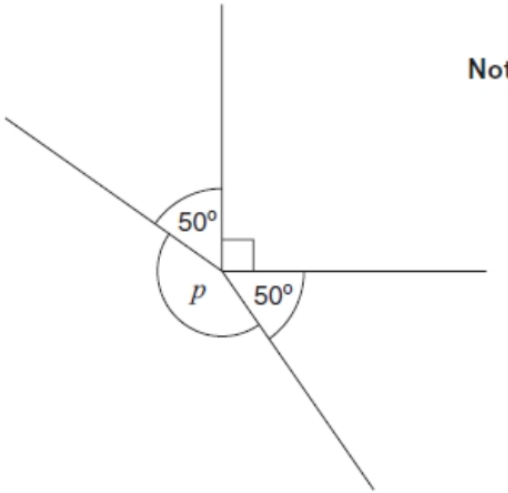
The diagram below is drawn using three straight lines.



Amir says that angle g is equal to 30° because vertically opposite angles are equal.

Do you agree? Explain your answer.

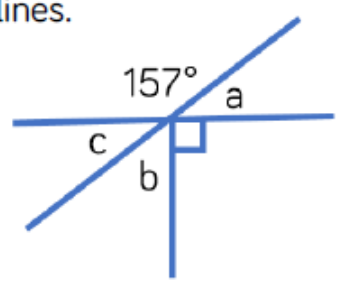
Find the size of all missing angles.
Is there more than one way to find the size of each angle?



Calculate the size of angle p in the diagram.

Do **not** use a protractor (angle measurer).

The diagram below is drawn using three straight lines.

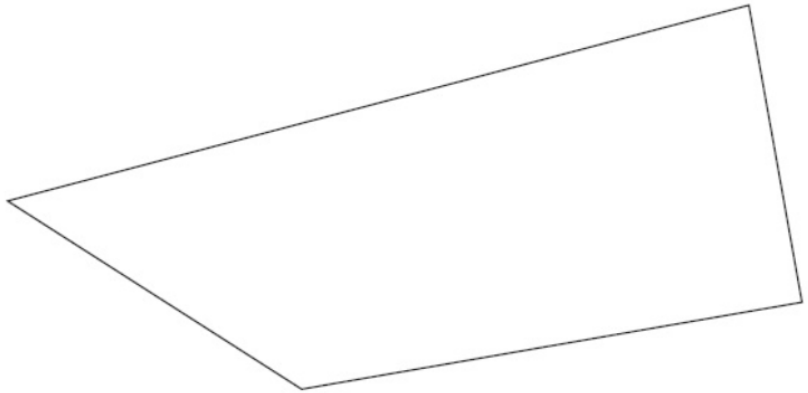


Whitney says that it's not possible to calculate all of the missing angles.

Do you agree? Explain why.

In this shape, one of the angles is **obtuse**.

Tick (✓) the obtuse angle.



Four angles meet at the same point on a straight line.

One angle is 81°

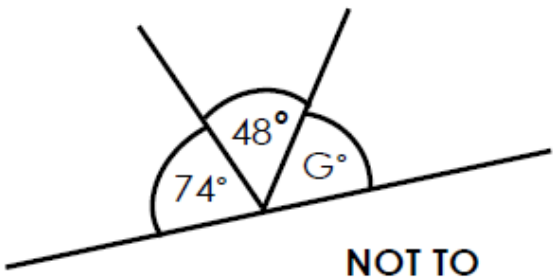
The other three angles are equal.

What size are the other three angles?

Draw a diagram to prove your answer.

Extra Challenge

Explain the mistakes



NOT TO SCALE

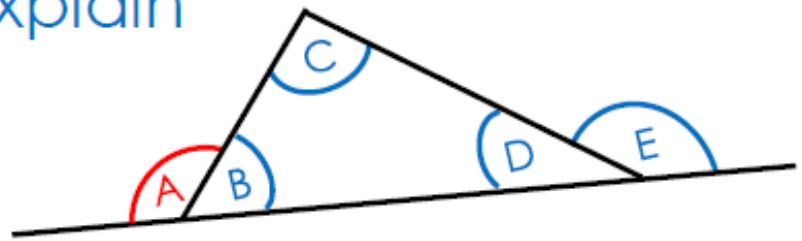
Calculate the size of angle G

Mistake 1
360° - (74° + 48°)
= 238°

Mistake 2
74° + 48° = 122°

Mistake 3
74° + 48° = 122°
180° - 122° = 68°

Explain



I can work out angle A if I know…

Angles C and D ☐

Angles D and E ☐

Angles C and E ☐

Tick correct option(s).

Explain how you know.

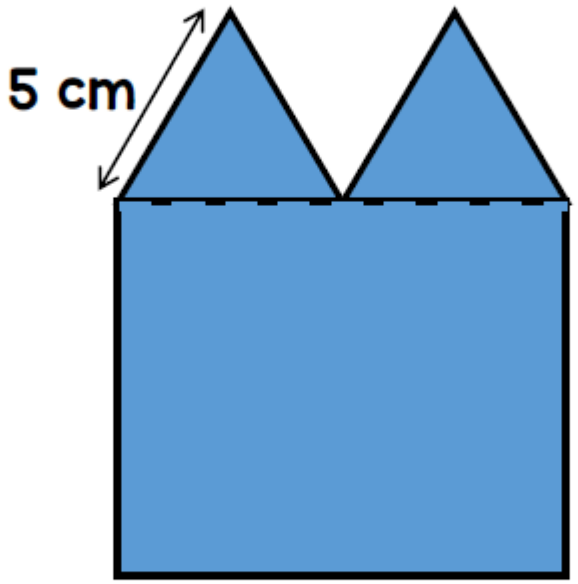
Tuesday 19th May 2020

L.O. – To calculate the angles within a triangle.

Problems of the day.

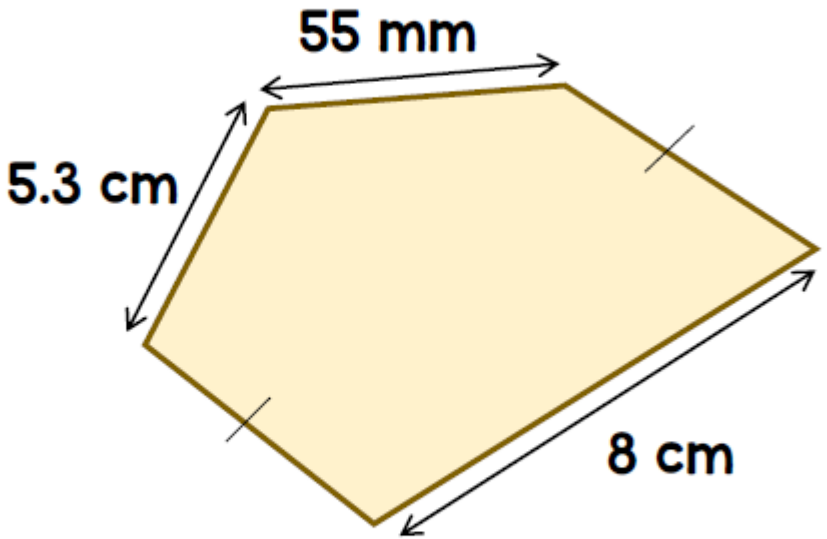
Hit space bar for answers but don't do it until you've tried!

1 A shape is made up of two equilateral triangles and a square.



What is the perimeter of the shape?

2 The perimeter of the pentagon is 25 cm.

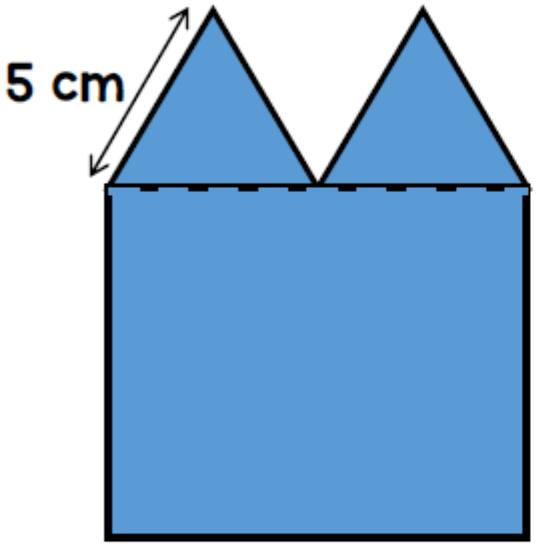


Find the missing lengths.

Problems of the day.

Hit space bar for answers but don't do it until you've tried!

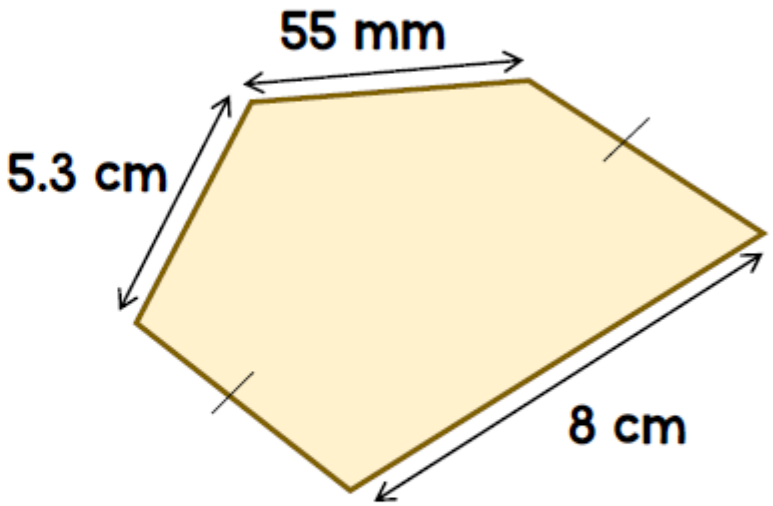
1 A shape is made up of two equilateral triangles and a square.



What is the perimeter of the shape?

The perimeter of the shape is 50 cm.

2 The perimeter of the pentagon is 25 cm.

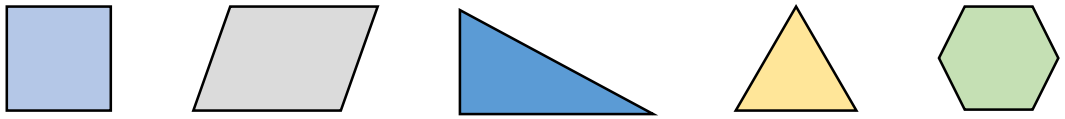


Find the missing lengths.

Each of the missing lengths are 31 mm or 3.1 cm.

Carroll Diagram

- Complete this Carroll diagram for these shapes:

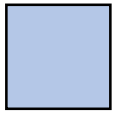
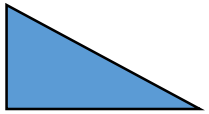
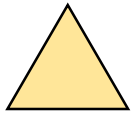


	Has at least one right angle	Has no right angles
Has more than 3 sides		
Has less than 4 sides		

Carroll Diagram

- Complete this Carroll diagram for these shapes:

Answers :

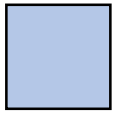
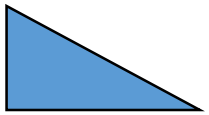
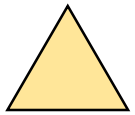
	Has at least one right angle	Has no right angles
Has more than 3 sides		
Has less than 4 sides		

Where could an isosceles triangle go?

Carroll Diagram

- Complete this Carroll diagram for these shapes:

Answers :

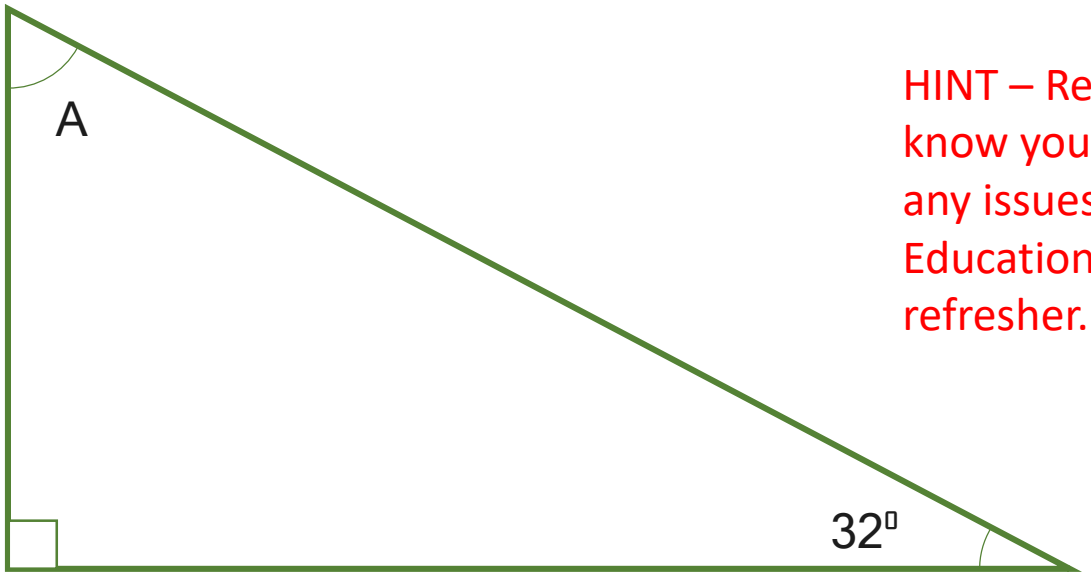
	Has at least one right angle	Has no right angles
Has more than 3 sides		
Has less than 4 sides		

Where could an isosceles triangle go?

less than four sides but either one right angle or no right angles because you can have a right-angled isosceles triangle

Triangles

- Calculate the missing angle:

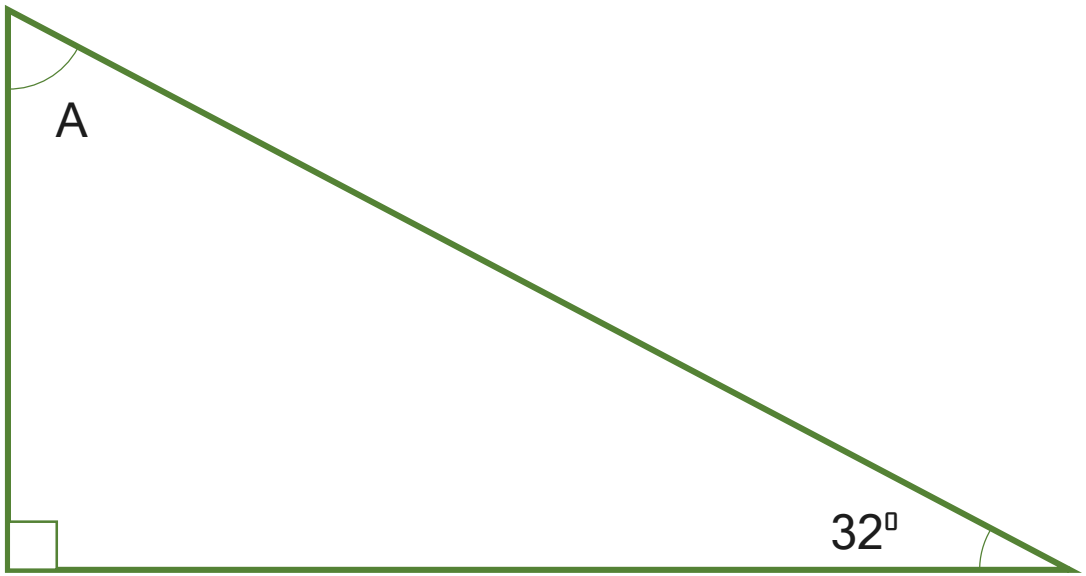


HINT – Remember you need to know your angles. If you have any issues here please go to Education City and get a refresher.

Triangles

- Calculate the missing angle:

All angles within a triangle must total 180°. Nothing more or nothing less.

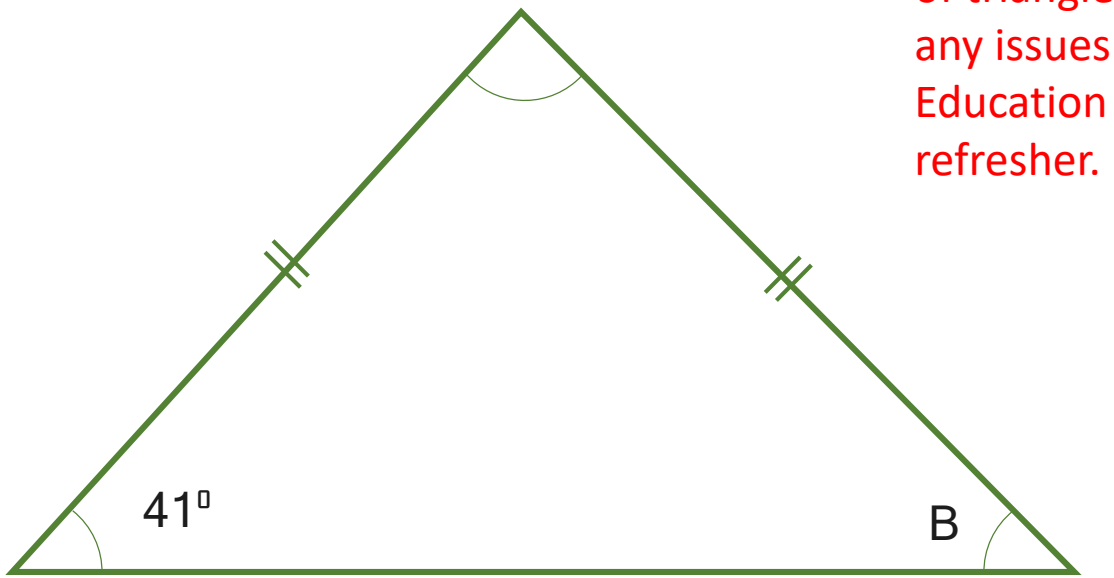


A = 58°

Triangles

- Calculate the missing angle:

HINT – Think about what type of triangle this is. If you have any issues here please go to Education City and get a refresher.



Triangles

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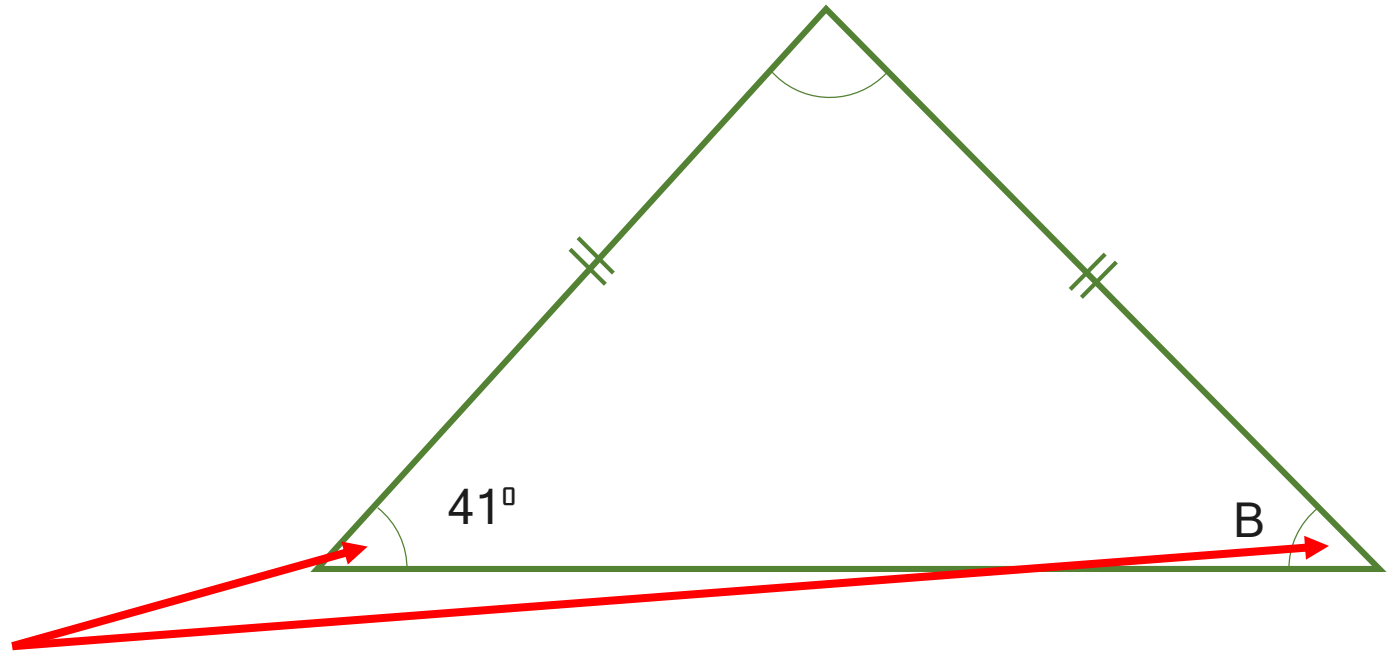
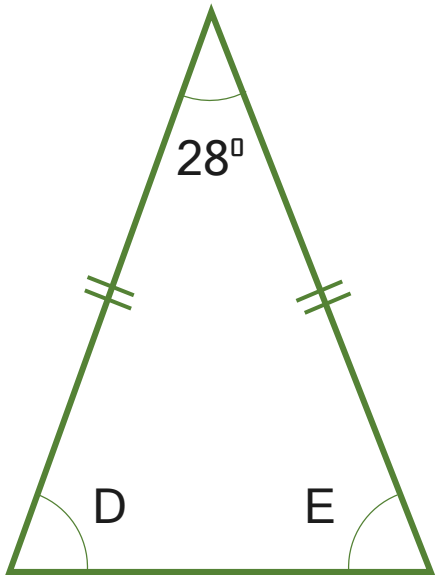


Opposing angles in an isosceles triangle must always be the same

B = 41°

Triangles

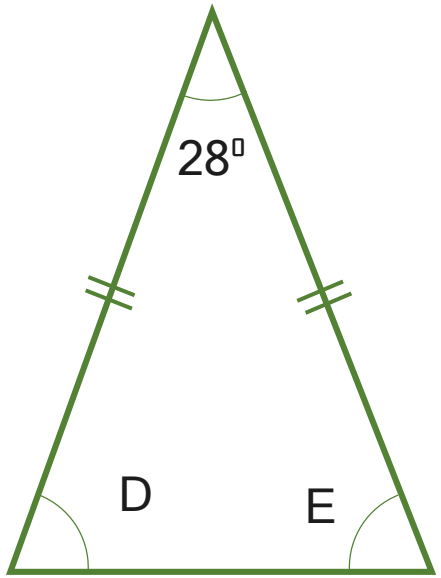
- Calculate the missing angles:



Triangles

- Calculate the missing angles:

180		
D	E	28



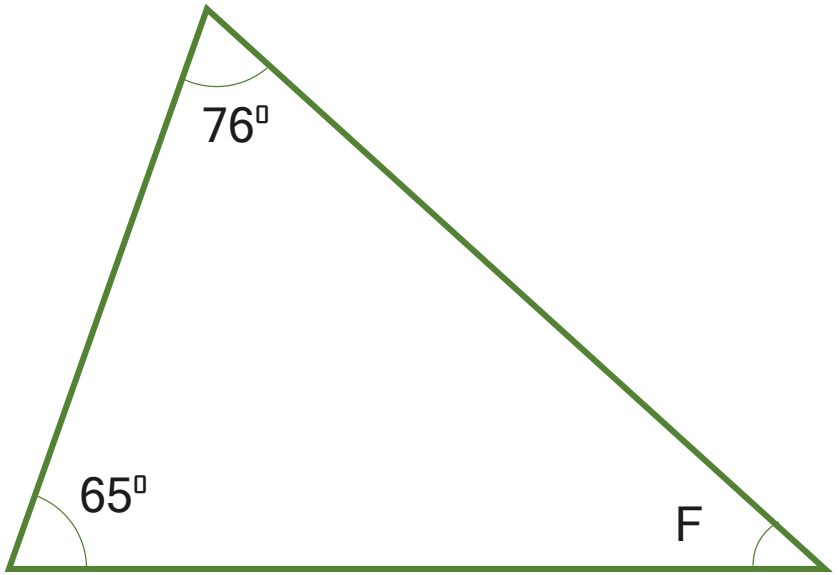
D = 76°

E = 76°

180° - 28° = 152°
152° ÷ 2 = 76°

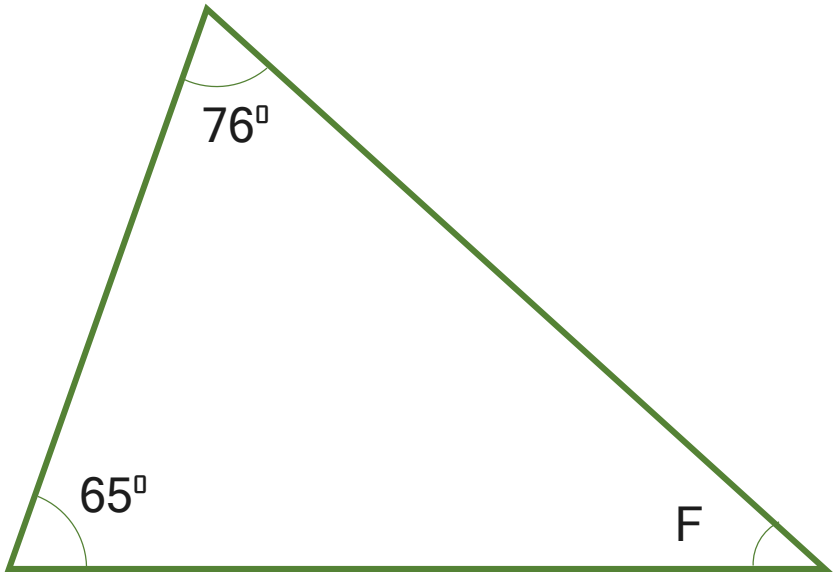
Triangles

- Calculate the missing angle:



Triangles

- Calculate the missing angle:



F = 39°

Tasks

Complete –

- Worksheet.

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Worksheet

Amir says,

My triangle has two 90° angles.

Can Amir be correct? Can you demonstrate this?

Two of the angles in a triangle are 70° and 40°

Jack says,

The triangle is equilateral.

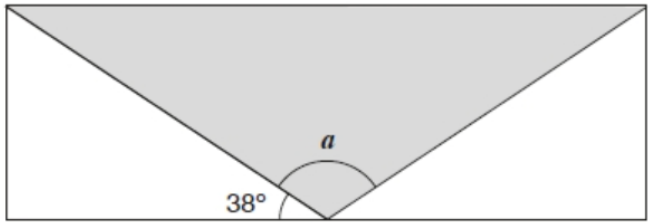
Explain why Jack is **not** correct.

Eva says,

My triangle is a scalene triangle. One angle is obtuse. One of the angles measures 56° The obtuse angle is three times the smallest angle.

Work out the size of each of the angles in the triangle.

A shaded **isosceles** triangle is drawn inside a rectangle.



Not to scale

Calculate the size of angle a.

True or False?

A triangle can never have 3 acute angles.

Anna has four **different** triangles.

Complete the table to show the size of the angles in each triangle.

Type of triangle	Angle 1	Angle 2	Angle 3
Isosceles	90°		
Right-angled	80°		
Isosceles	70°		
Isosceles	70°		

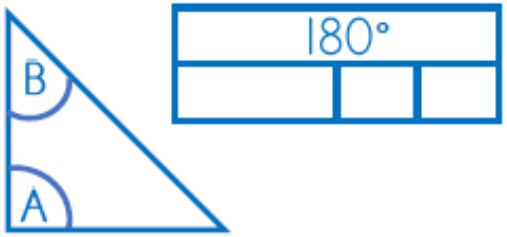
Extra Challenge

Different ways

'In the isosceles triangle, angle A is double angle B'

What are the possible sizes of angles A and B?

Solution 1

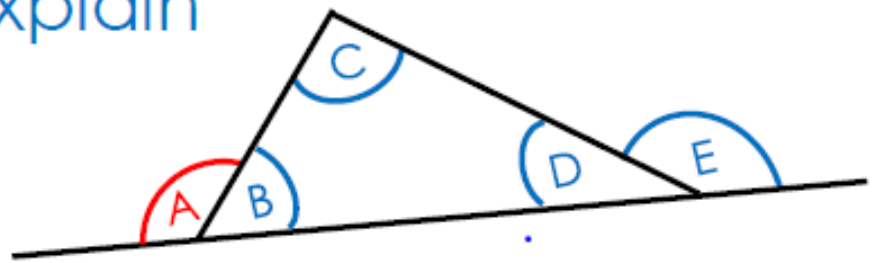


Angle A = Angle B =

Solution 2

Angle A = Angle B =

Explain



I can work out angle A if I know…

Angles C and D ☐

Angles D and E ☐

Angles C and E ☐

Tick correct option(s).

Explain how you know.

Wednesday 20th May 2020

L.O. – To calculate the angles within a quadrilateral.

Problems of the day.

Hit space bar for answers but don't do it until you've tried!

1 Helen has £400

She spends $\frac{1}{10}$ of the money on a new toaster.

She spends $\frac{1}{8}$ of the amount left on a pair of trousers.

Which item costs the most?

2 $\frac{3}{8}$ of people watching a play are adults.

The rest of the people watching are children.

There are 32 more children than adults watching the play.

How many people are watching the play in total?

Problems of the day.

Hit space bar for answers but don't do it until you've tried!

1 Helen has £400

She spends $\frac{1}{10}$ of the money on a new toaster.

She spends $\frac{1}{8}$ of the amount left on a pair of trousers.

Which item costs the most?

The trousers cost the most They cost £45 and the toaster only costs £40

2 $\frac{3}{8}$ of people watching a play are adults.

The rest of the people watching are children.

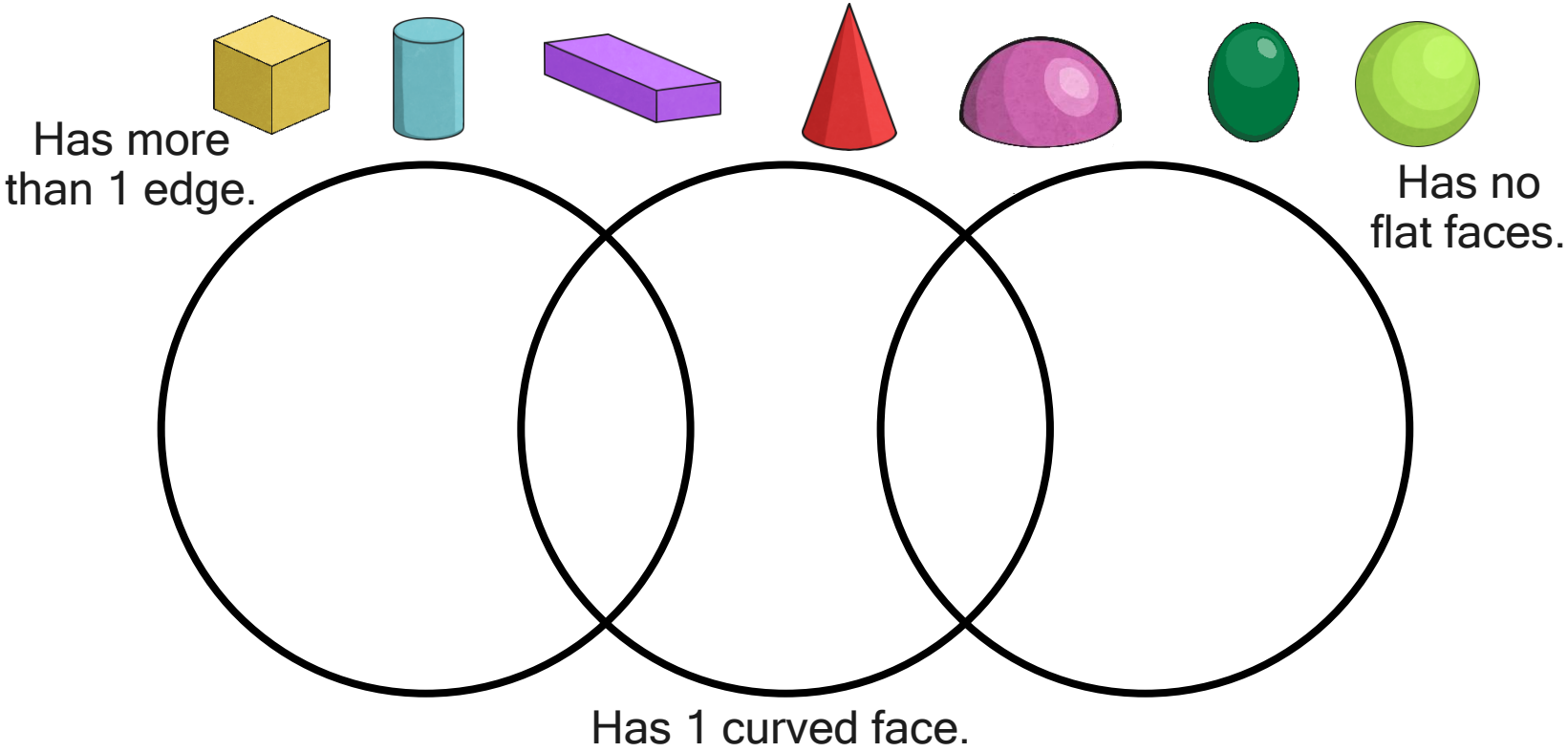
There are 32 more children than adults watching the play.

How many people are watching the play in total?

128 people are watching the play in total.

Venn Diagram

- Complete this Venn diagram for these shapes:



Venn Diagram

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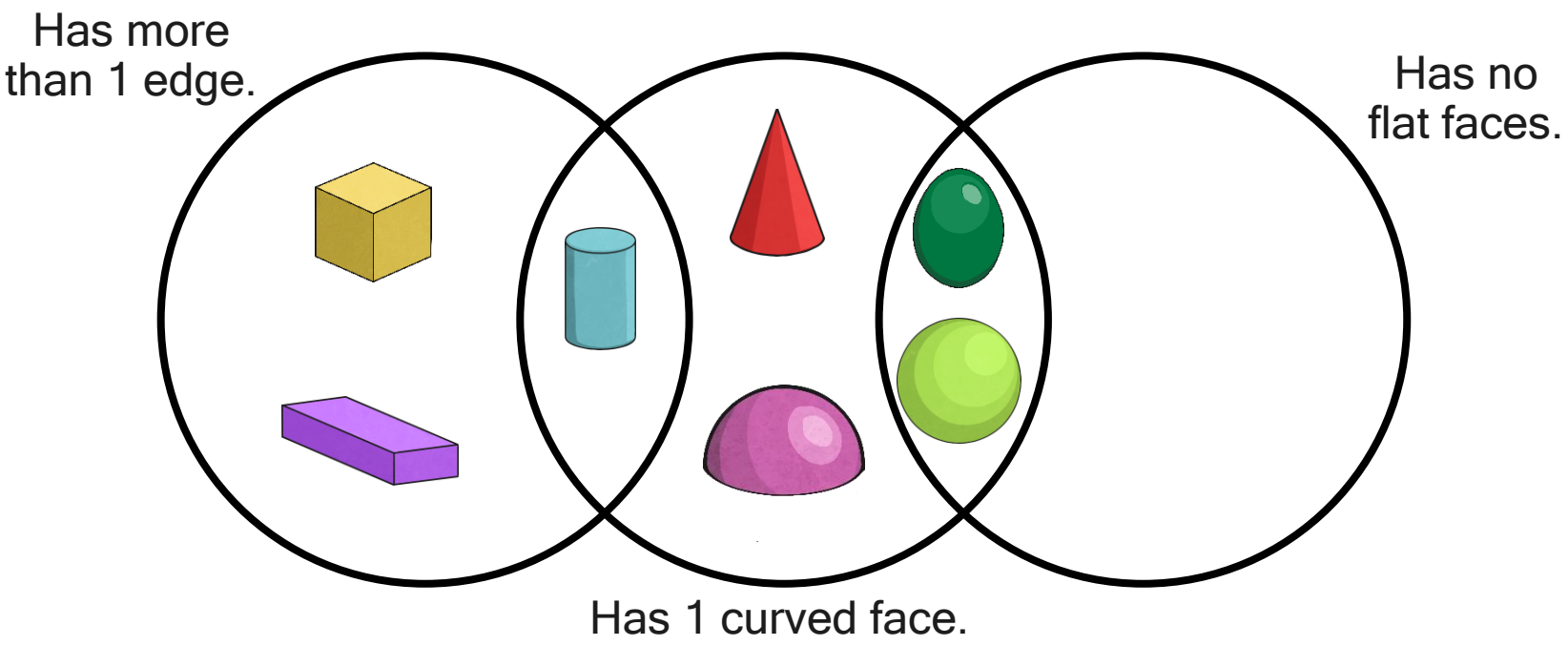
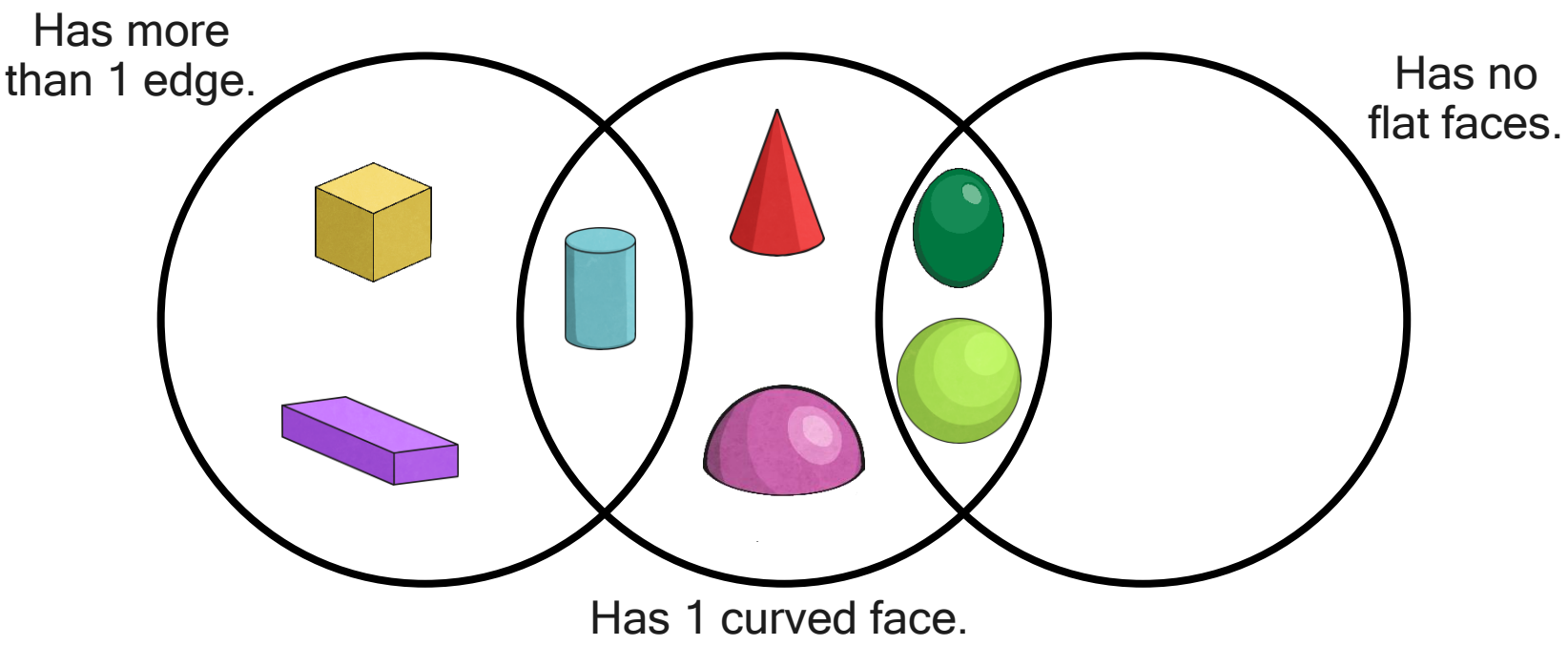


Can you describe a shape that could go in “Has no flat faces” only?

Venn Diagram

- Complete this Venn diagram for these shapes:



Can you describe a shape that could go in “Has no flat faces” only?

A shape like a lens which has 2 curved faces and one edge between.

What 2D Shape Am I?

Read the clues and work out which 2D shape I could be…

My internal angles total 180°. I have one right angle.

I have no right angles and four equal sides.

I have four sides and one set of parallel lines.

a) All my internal angles are equal and are 180° - 36° each.

My two opposite angles are right angles. Of the two remaining angles, one is acute and the other obtuse.

What 2D Shape Am I?

Read the clues and work out which 2D shape I could be…

My internal angles total 180°. I have one right angle.

right-angled triangle

I have no right angles and four equal sides.

rhombus

I have four sides and one set of parallel lines.

trapezium

a) All my internal angles are equal and are 180° - 36° each.

decagon

My two opposite angles are right angles. Of the two remaining angles, one is acute and the other obtuse.

kite

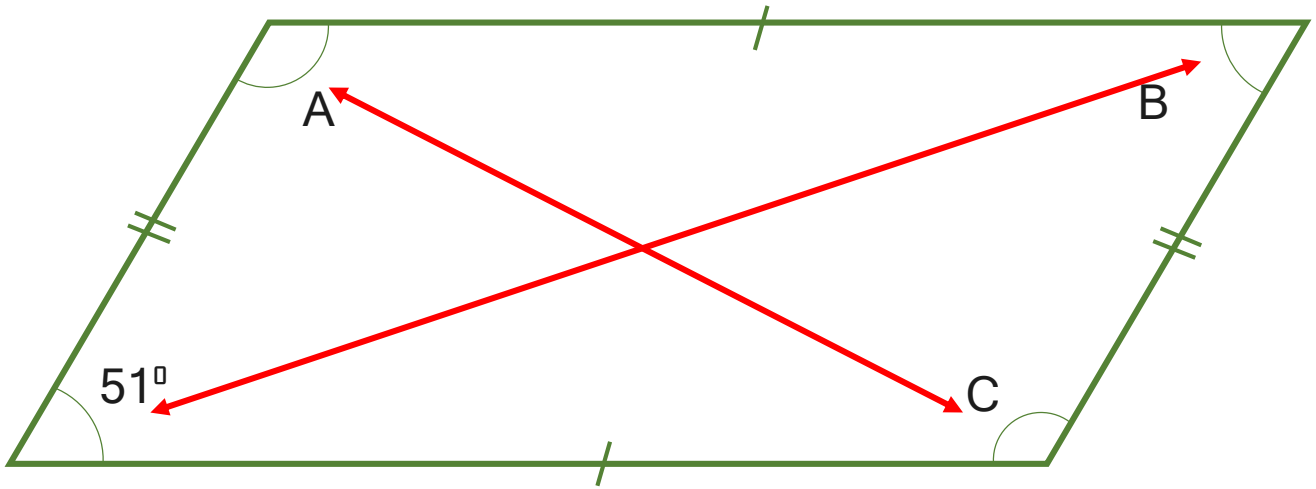
Quadrilaterals

- Calculate the missing angles:

HINT – Remember you need to know your angles. If you have any issues here please go to Education City and get a refresher.

Quadrilaterals

- Calculate the missing angles:



A = 129°

B = 51°

C = 129°

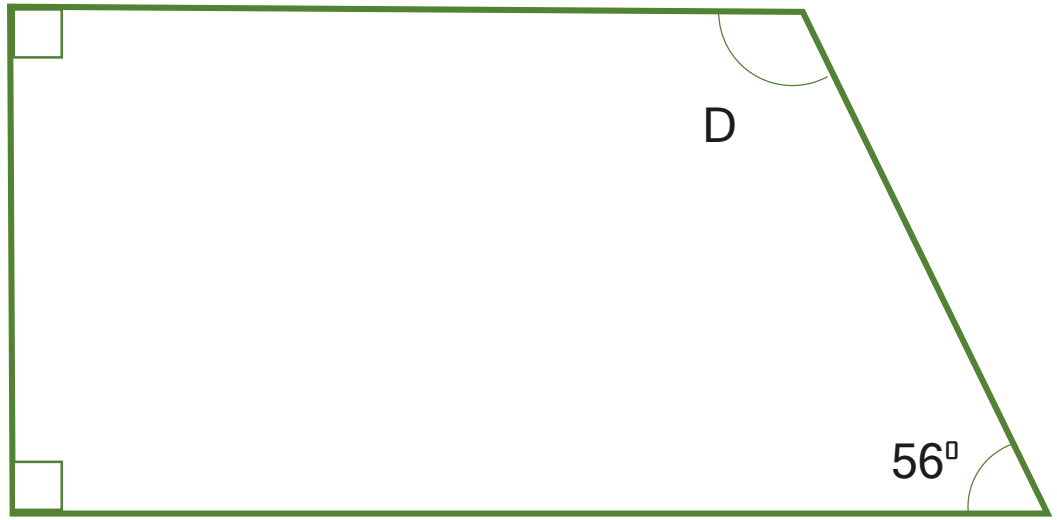
360° - 51°x 2 = 258°
258° ÷ 2 = 129°

Remember -

- Opposite angles in a parallelogram are the same.
- All the angles within a quadrilateral must total 360°.

Quadrilaterals

- Calculate the missing angles:



Quadrilaterals

- Calculate the missing angles:

Remember -

- The squares in the corners represent 90°.

D = 124°

360° - 56° - 90° - 90° = 124°

Quadrilaterals

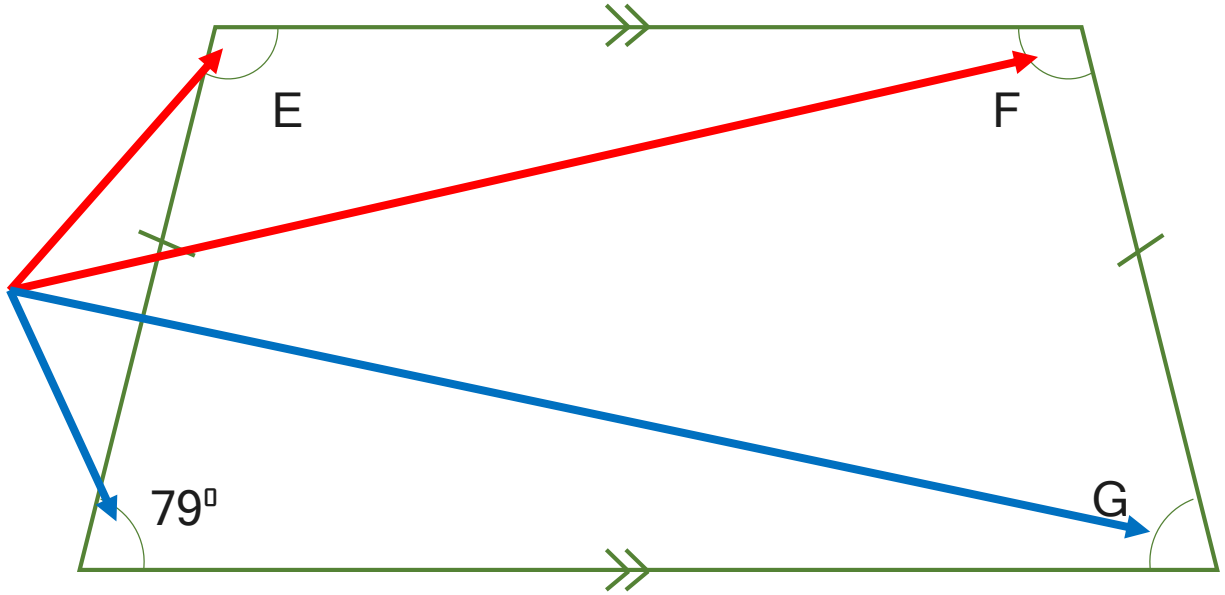
- Calculate the missing angles:

Quadrilaterals

- Calculate the missing angles:

Remember -

- Reflective angles in an isosceles trapezium are the same.
- All the angles within a quadrilateral must total 360°.



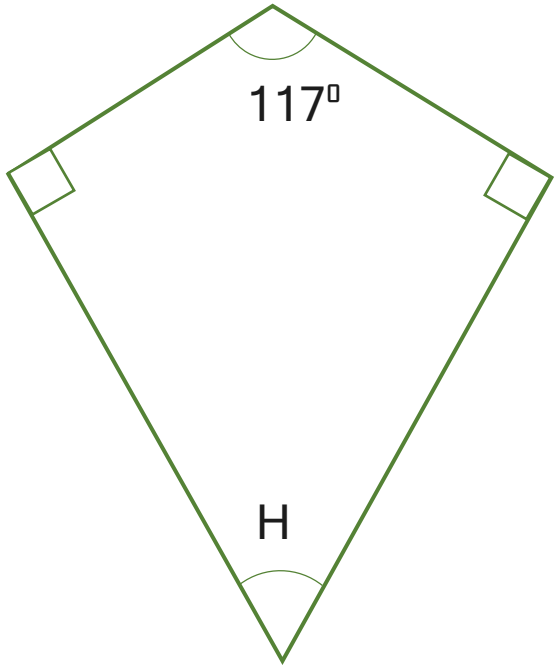
E = 101°

F = 101°

G = 79°

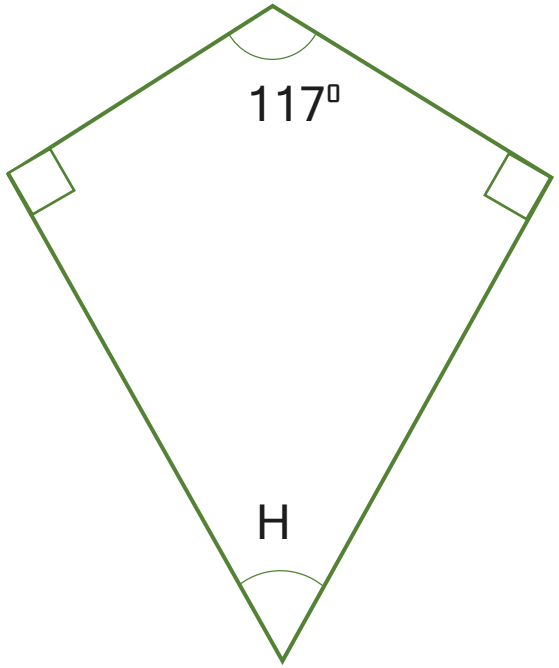
Quadrilaterals

- Calculate the missing angles:



Quadrilaterals

- Calculate the missing angles:



H = 63°

Hide Answers

Tasks

Complete –

- Worksheet.

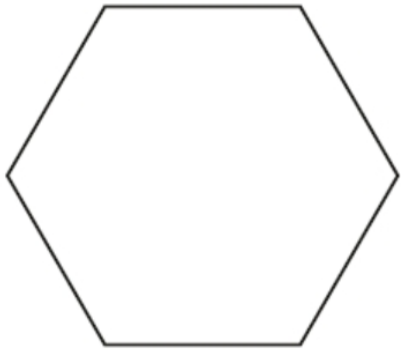
If you have any misunderstandings then please head to Education City or email the school on –

learning@wembleyprimary.brent.sch.uk

Worksheet

Here is a hexagon.

Draw **two** straight lines across the hexagon to make two triangles and two quadrilaterals.



Here is a shape on a grid.

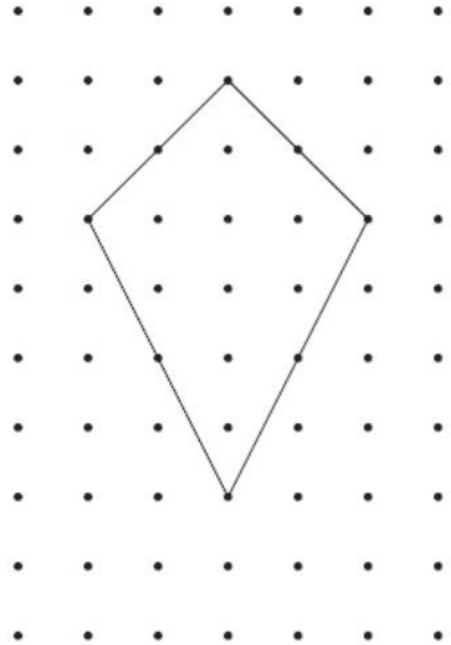
For each statement, put a tick (✓) if it is true.
Put a cross (✗) if it is not true.

The shape is a quadrilateral. ☐

The shape has 2 lines of symmetry. ☐

The shape is a parallelogram. ☐

The shape has one right angle. ☐

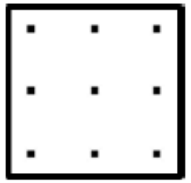


Jack says,

All quadrilaterals have at least one right angle.

Draw two different shapes to prove Jack wrong. Measure and mark on the angles.

How many quadrilaterals can you make on the geoboard?

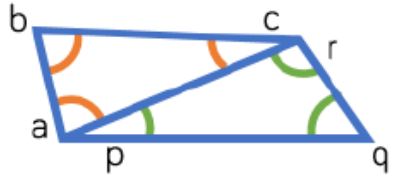


Identify the names of the different quadrilaterals.

What do you notice about the angles in certain quadrilaterals?

If your geoboard was 4 × 4, would you be able to make any different quadrilaterals?

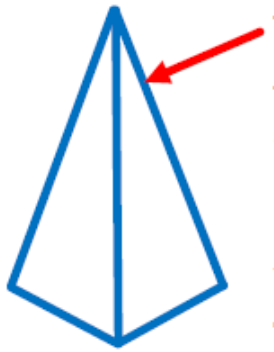
This quadrilateral is split into two triangles.



Use your knowledge of angles in a triangle to find the sum of angles in a quadrilateral.

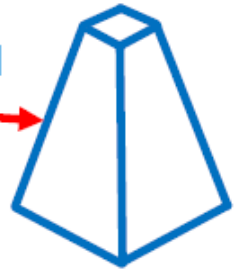
Split other quadrilaterals into triangles too. What do you notice?

Extra Challenge



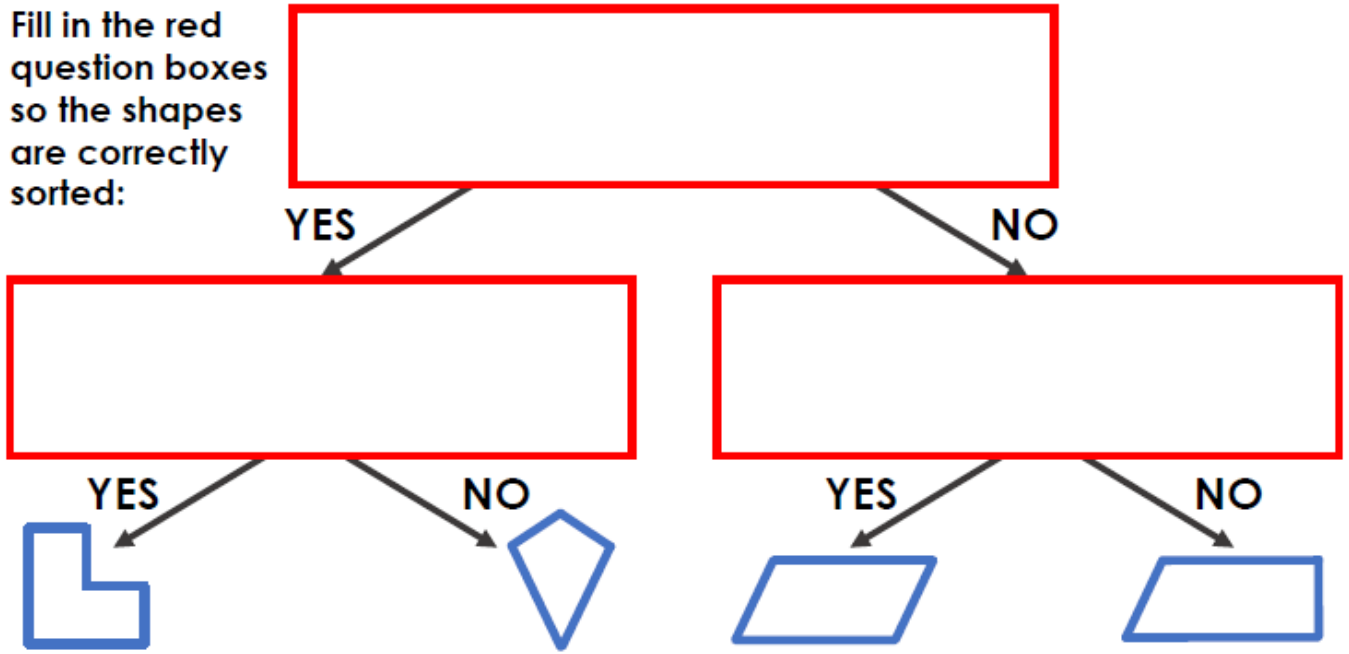
This is a square-based pyramid.

The top of the square-based pyramid is cut off. This new shape is made.



How many more faces, edges and vertices does the new shape have than the square-based pyramid?

Fill in the red question boxes so the shapes are correctly sorted:



Thursday 21st May 2020

L.O. – To understand and construct nets.

Problems of the day.

Hit space bar for answers but don't do it until you've tried!

1 Usman saves 10p and 50p coins in his money box.

He has saved £12.70

32 of the coins in the money box are 10p coins.

How many 50p coins are in the box?

2 The table shows the number of loaves of bread sold in a shop each week in February.

Week	Number of loaves sold
1st Week	480
2nd Week	400
3rd Week	70
4th Week	250

Which week did the shop sell $\frac{1}{3}$ of the total number of loaves of bread sold in February?

Problems of the day.

Hit space bar for answers but don't do it until you've tried!

1 Usman saves 10p and 50p coins in his money box.

He has saved £12.70

32 of the coins in the money box are 10p coins.

How many 50p coins are in the box?

There are 19 50p coins in the box.

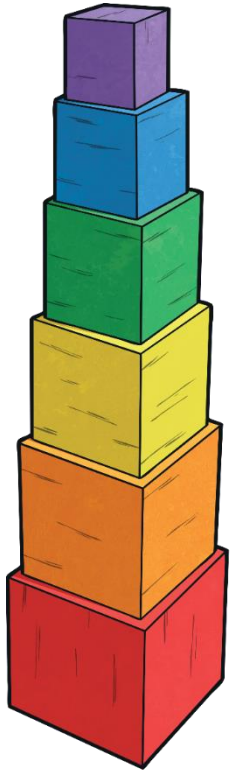
2 The table shows the number of loaves of bread sold in a shop each week in February.

Week	Number of loaves sold
1st Week	480
2nd Week	400
3rd Week	70
4th Week	250

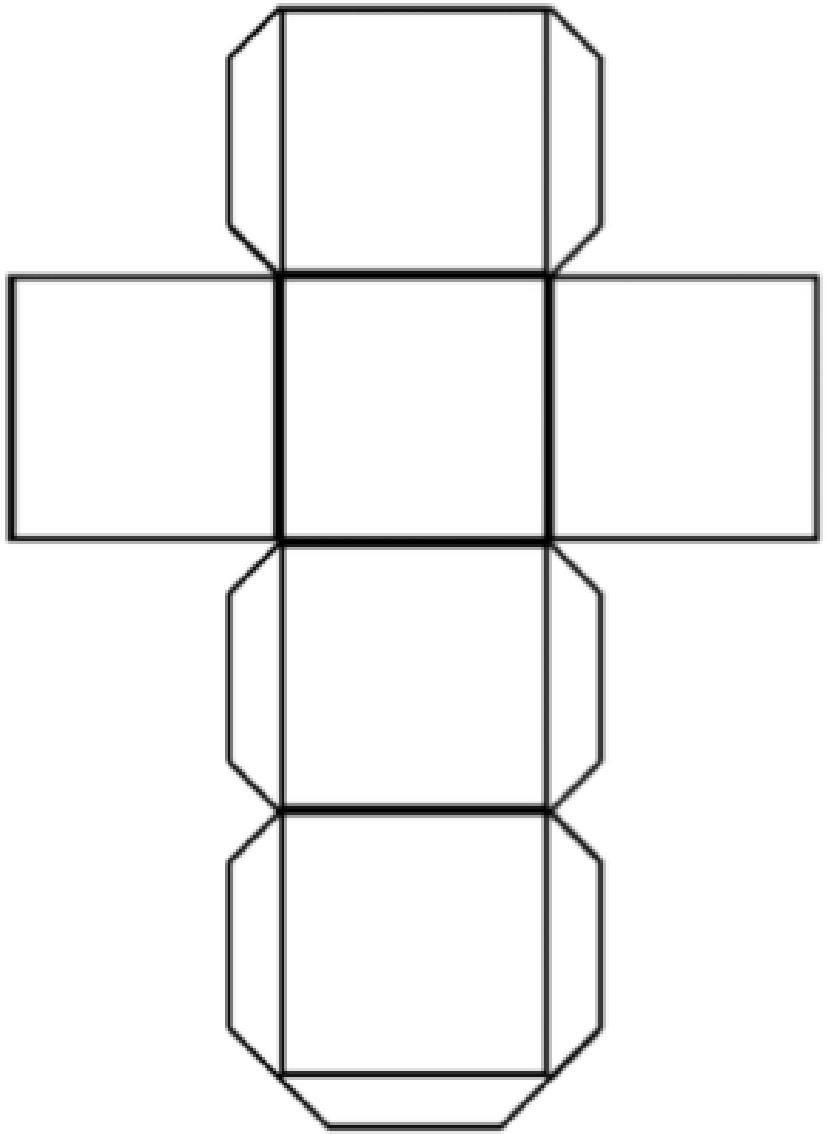
Which week did the shop sell $\frac{1}{3}$ of the total number of loaves of bread sold in February?

2nd week.

Cube Nets



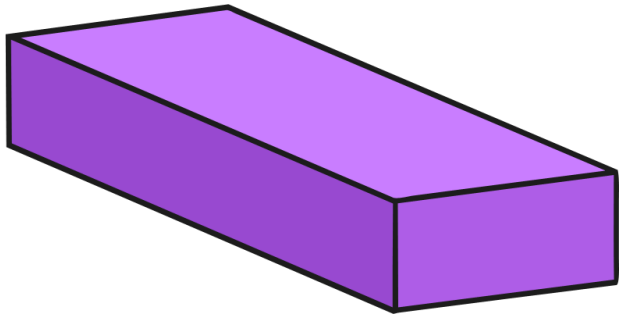
- On plain paper draw a net to make a cube with each edge being 5cm.
- Don’t forget to add tabs to help join the faces.
- Cut out and make your cube.

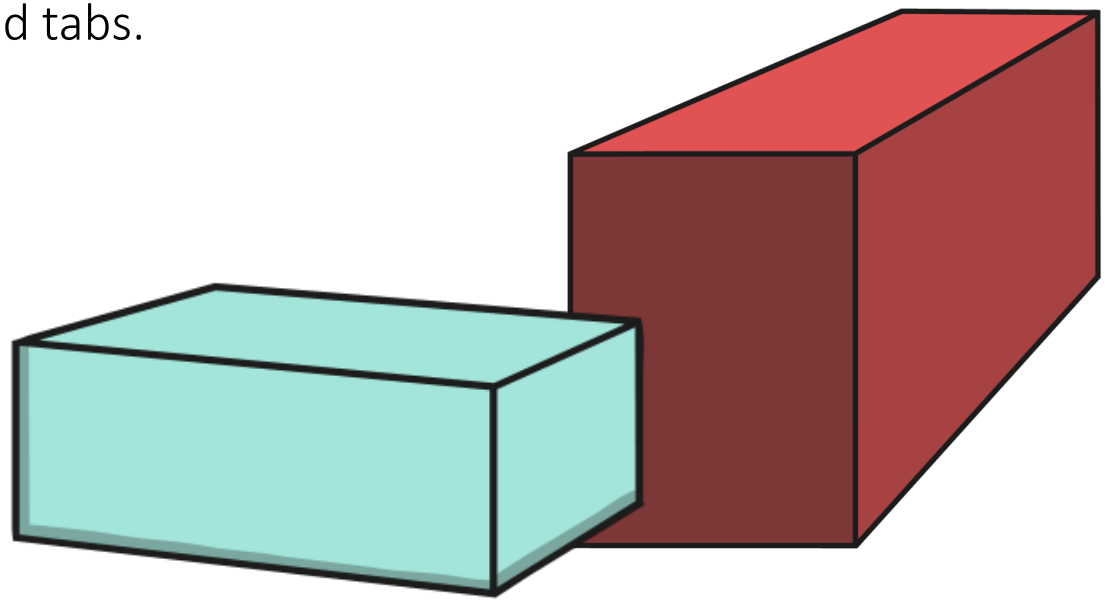


Can you make any cube nets with varying edge sizes and then make a tower?

Cuboid Nets

- Work with an adult or older sibling to draw a net for a cuboid of the following size:
- 9cm × 6cm × 4cm
- Think carefully about where you need to add tabs.
- Make the cuboid from your net.

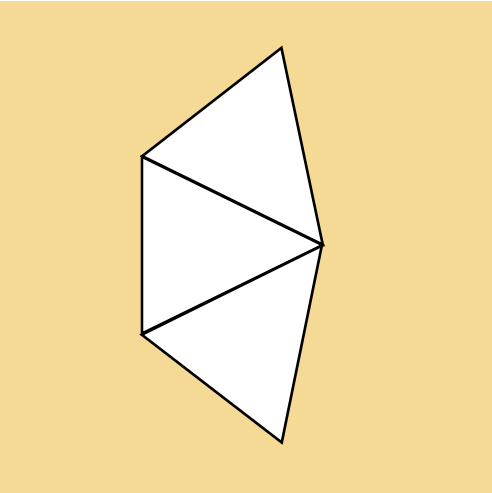




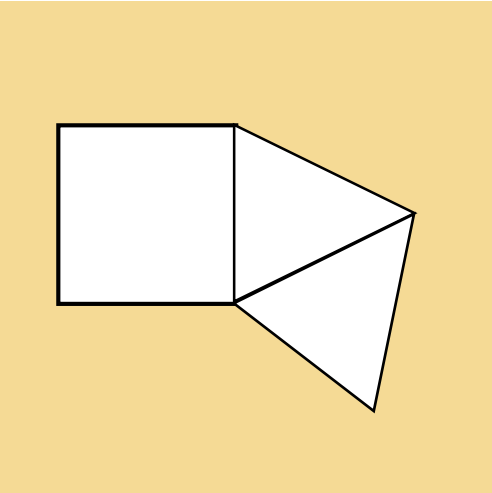
You could draw a net of a different size. Compare and check your nets. Make the cuboid.

Square-Based Pyramid Nets

- Complete these nets to make a square-based pyramid.



Try a number of solutions to each one.



Complete a net for a square-based pyramid or other 3D shapes.

What Am I?

I have seven faces, five of which are rectangles, all of which are joined side to side.

What Am I?

I have seven faces, five of which are rectangles, all of which are joined side to side.

My other 2 faces have five sides and are at opposite ends.

What Am I?

I have seven faces, five of which are rectangles, all of which are joined side to side.

My other 2 faces have five sides and are at opposite ends.

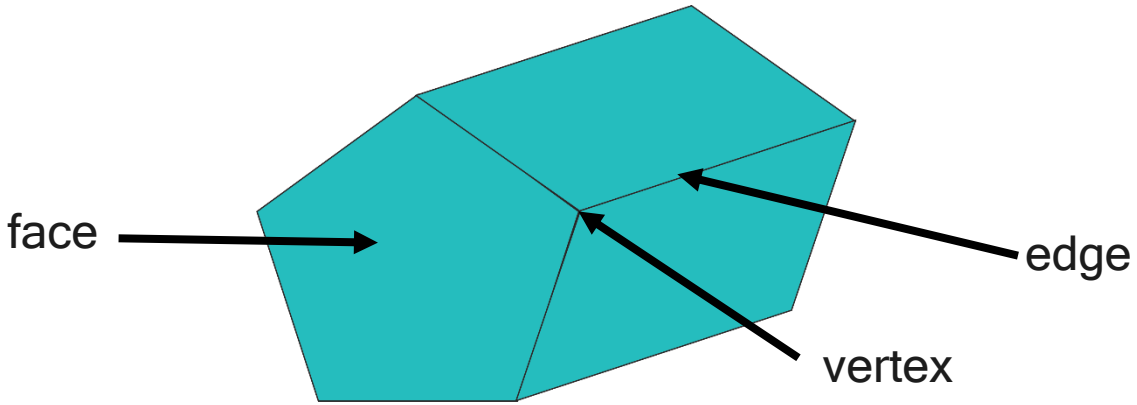
I have ten vertices and fifteen edges. I have ten shorter edges that are all the same length, and five longer edges that are all the same length.

What Am I?

I have seven faces, five of which are rectangles, all of which are joined side to side.

My other 2 faces have five sides and are at opposite ends.

I have ten vertices and fifteen edges. I have ten shorter edges that are all the same length, and five longer edges that are all the same length.



Choose your own 3D shape and write a “What am I?” description.

Tasks

Complete –

- Worksheet.

If you have any misunderstandings then please head to Education City or email the school on –

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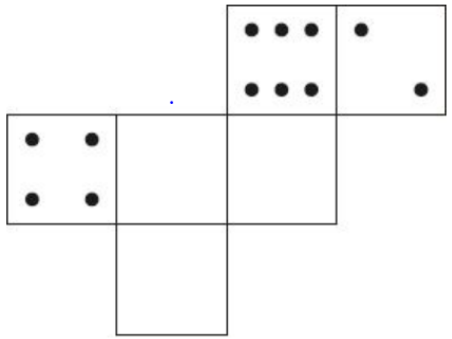
Worksheet

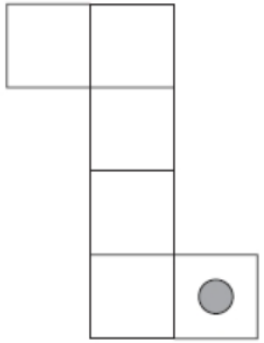
On a dice, the sum of the dots on opposite faces is always 7

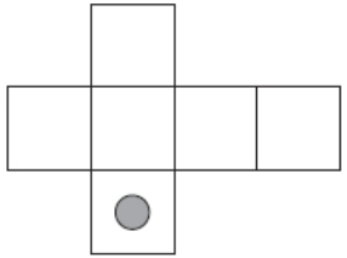
Draw dots on the three empty faces of the net so that it could fold up to make a dice.

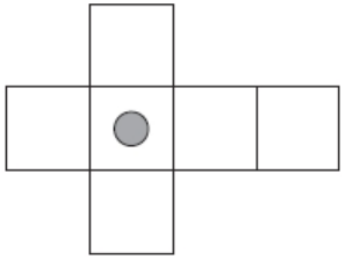


Here are three nets of a cube.

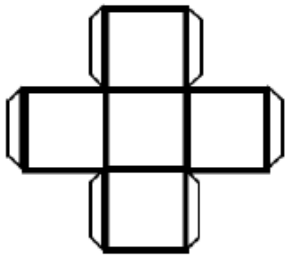
On each net draw **one more dot** so that each cube will have dots on **opposite** faces.





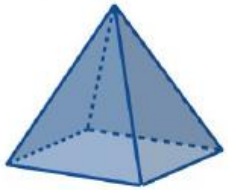


Dora thinks that this net will fold to create a cube.



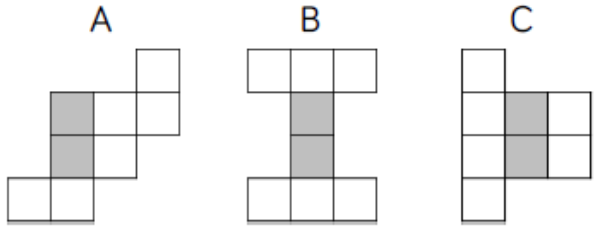
Do you agree with Dora?
Explain your answer.

Draw possible nets of these three-dimensional shapes.



Here is an open box.

Which of the nets will fold together to make the box?
The grey squares show the base.



Extra Challenge

Fill the gaps

Fill in the missing spaces in the table:

Name of 3D Shape	Faces	
Cuboid		8
	5	6
Square-based pyramid		

Different ways

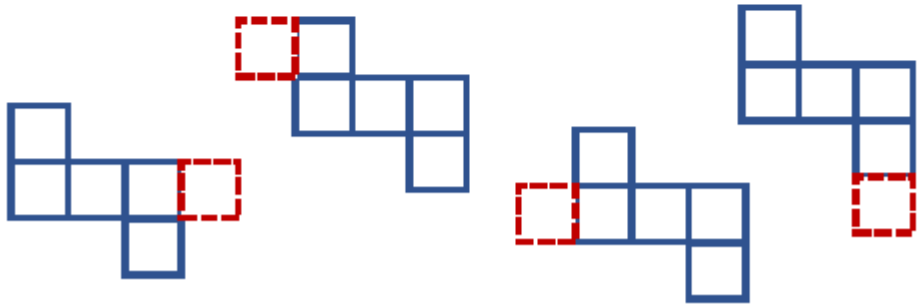
This pyramid is made using four equilateral triangles.

Draw one more triangle on each diagram to complete the net for the pyramid. Find three different ways it can be done.

It is correct?

One more square needs adding to this diagram to make the net of a cube.

Which diagrams have been completed correctly to make the net of a cube?



Friday 22nd May 2020

L.O. – To solve investigations from the week.

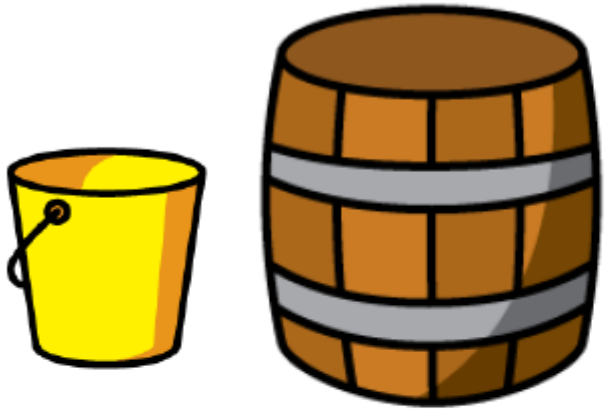
This is the opportunity to use the knowledge that you have learnt throughout the week to use in an investigation.

This is a great chance for you to challenge yourself and ask yourself questions to push your understanding further.

Problems of the day.

Hit space bar for answers but don't do it until you've tried!

1 A bucket holds 5 litres of water.



Yasmin uses 7 and a quarter buckets to fill the barrel with water.

How much water does the barrel hold?

2 Leah has a piece of ribbon 4.8 metres long.

She cuts a 1.2 m piece of ribbon off from the end.

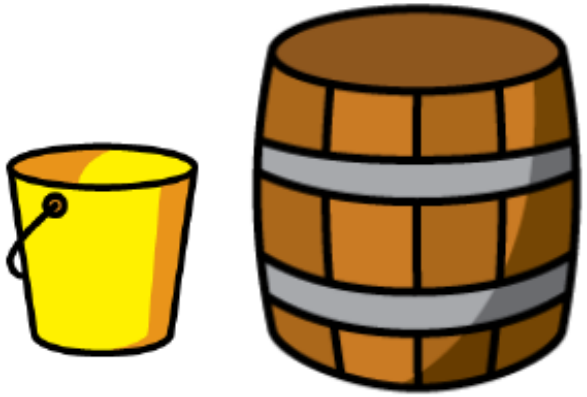
She cuts the remaining ribbon into 2 pieces of equal length.

How long are the pieces of ribbon?

Problems of the day.

Hit space bar for answers but don't do it until you've tried!

1 A bucket holds 5 litres of water.



Yasmin uses 7 and a quarter buckets to fill the barrel with water.

How much water does the barrel hold?

The barrel holds 36 and a quarter litres of water.

2 Leah has a piece of ribbon 4.8 metres long.

She cuts a 1.2 m piece of ribbon off from the end.

She cuts the remaining ribbon into 2 pieces of equal length.

How long are the pieces of ribbon?

The pieces of ribbon are 1.8 m long.

Tasks

Complete –

- Worksheet.

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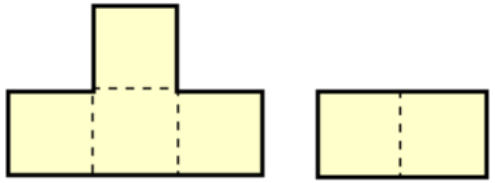
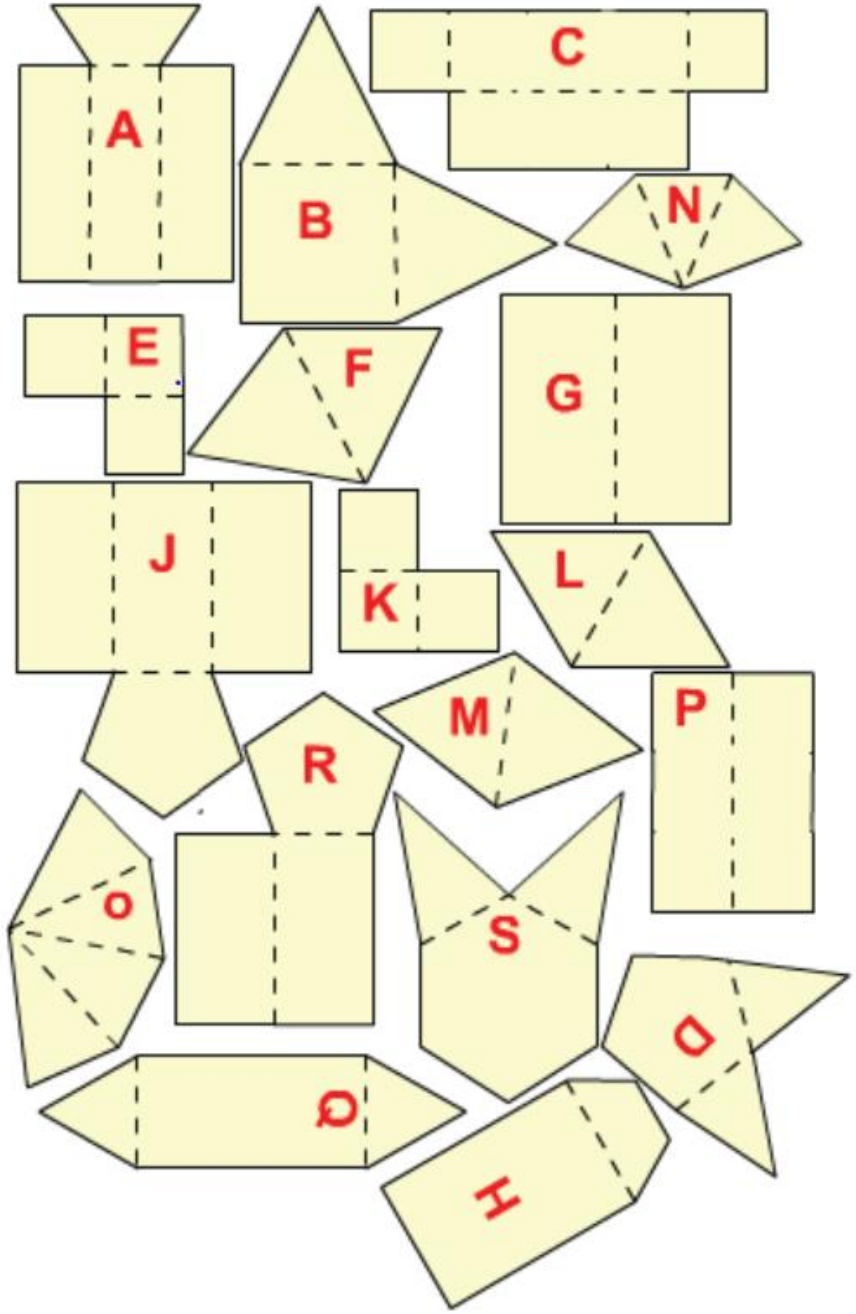
learning@wembleyprimary.brent.sch.uk

Worksheet

Cut Nets

The net of a cube has been cut into two. It could be put together in several ways so that it could be folded into a cube.



Here are the nets of 9 solid shapes. Each one of these has been cut into 2 pieces, like the net of the cube.

Can you see which pieces go together?