Week 1

Year 6 Maths Challenge

Last term (Y6 Spring term) Ratio

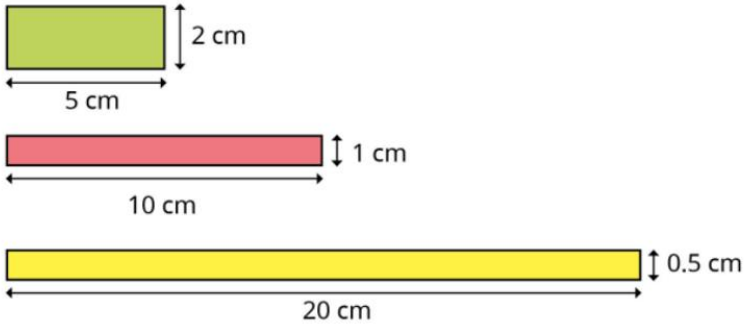
Jack puts red and yellow tiles in this pattern.

R	R	Y	Y	Y	R	R	Y	Y	Y

Can Jack continue this pattern without there being any tiles left over?
Explain your answer.

Previous learning… Area

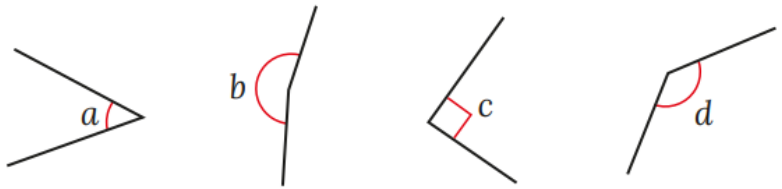
Which rectangle has the greatest area?



Sketch the next rectangle in the pattern.
What is its area?
How do you know?

We are currently learning…angles

- For each angle, choose a word to complete the sentence.



acute | right | obtuse | reflex

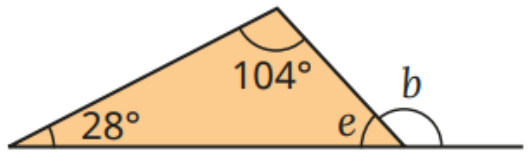
Angle _____ is a/an _____ angle.

Order the angles from smallest to greatest.

We are learning next..missing angles in triangles

Work out the sizes of the angles marked with letters.

Explain each step in your workings.



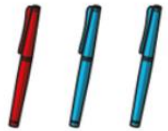
Week 2

Year 6 Maths Challenge

Last term (Y6 Spring term) Ratio.

In a box, there are some red, blue and green pens.
The ratio of red pens to green pens is 3 : 5

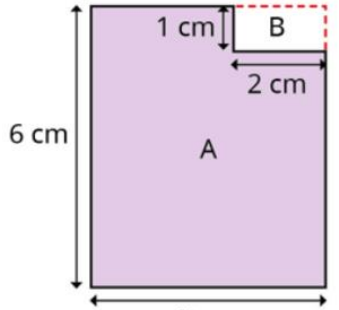
For every 1 red pen, there are 2 blue pens.



There are 6 red pens in the box.
How many green pens are there?
How many blue pens are there?
Write the ratio of red pens to blue pens to green pens.

Previous learning…Area

Tiny is finding the area of this shape.



Area of A = 6 cm × 5 cm
= 30 cm²

Area of B = 1 cm × 2 cm
= 2 cm²

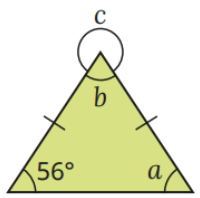
Total area = 32 cm²

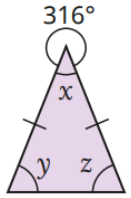
Do you agree with Tiny?
Explain your answer.

We are currently learning…angles in a triangle

Work out the sizes of the angles marked with letters.

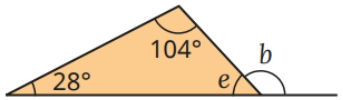
Explain each step in your workings.





Work out the sizes of the angles marked with letters.

Explain each step in your workings.



We are learning next…quadrilaterals

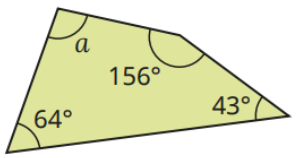
What is a quadrilateral?

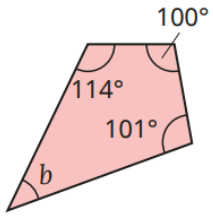
In what ways can quadrilaterals be different from one another?

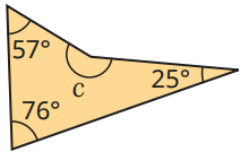
What is the sum of the interior angles in a quadrilateral?

What is the same/different about a rhombus and a square?

- Work out the missing angles in the quadrilaterals.





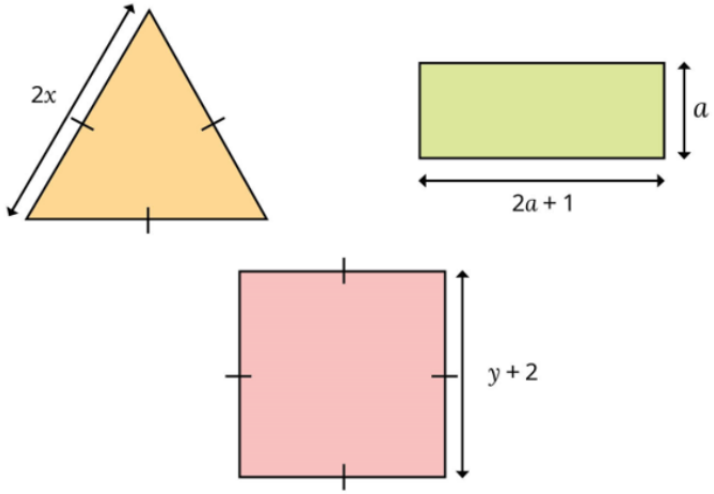


Week 3

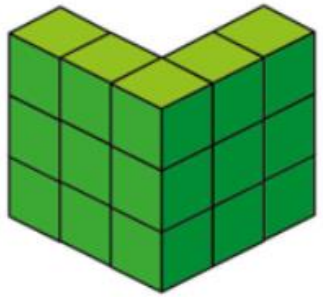
Year 6 Maths Challenge

Last term (Y6 Spring term) Algebra

Write expressions for the perimeters of the shapes.



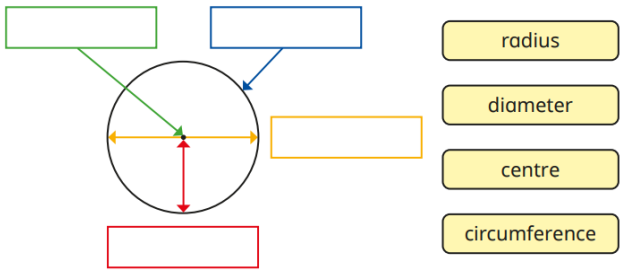
Previous learning…Volume



What could the volume of this shape be?
Compare answers with a partner.

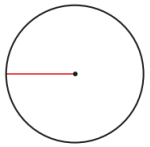
We are currently learning…circles

- Use the labels to complete the diagram.



radius
diameter
centre
circumference

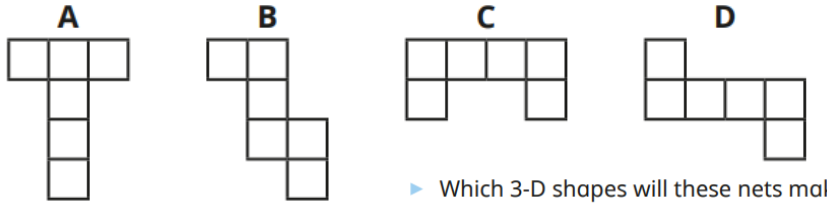
- Filip has drawn a 5 cm straight line from the centre of the circle to its edge.



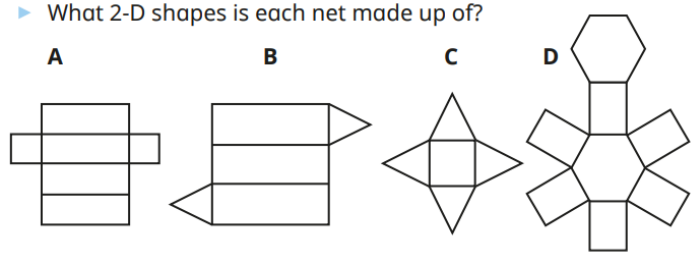
- What is the name of the line Filip has drawn?

We are learning next…nets

- Which nets will fold up to make a cube?



- Which 3-D shapes will these nets make?
- What 2-D shapes is each net made up of?

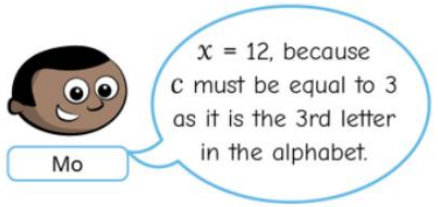


Week 4

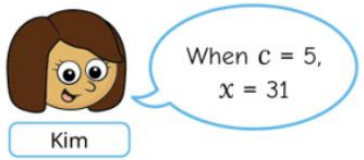
Year 6 Maths Challenge

Last term (Y6 Spring term)
Algebra.

$x = 2c + 6$



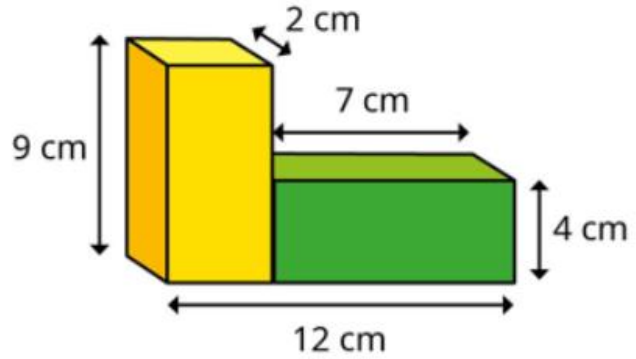
Is Mo correct?
Explain why.



Explain why Kim is wrong.
What is the correct value of x when $c = 5$?

Previous learning…Volume of compound shapes

Calculate the volume of the compound shape.

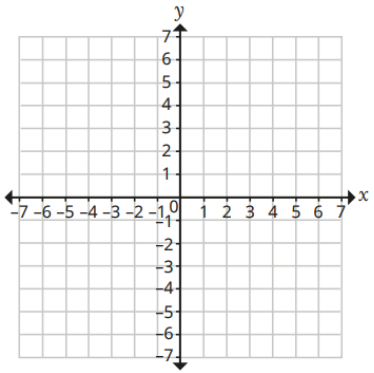


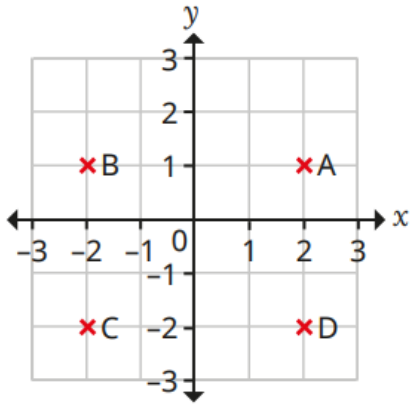
We are currently learning…co-ordinates in all 4 quadrants

- What are the coordinates of the four points?

Plot and label the points on the grid.

- D (4, 5)
- E (–3, 2)
- F (6, –5)
- G (–1, –7)



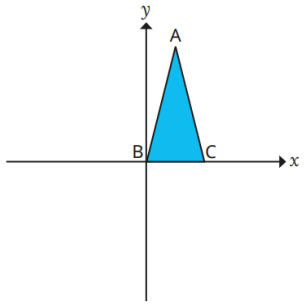


How did you work them out?

We are learning next…translations

An isosceles triangle is drawn on a coordinate grid.

Vertex A has the coordinates (2, 5) and vertex B is at (0, 0).



The triangle is translated 4 to the right and 6 down.

What are the new coordinates of vertex C?

Week 5

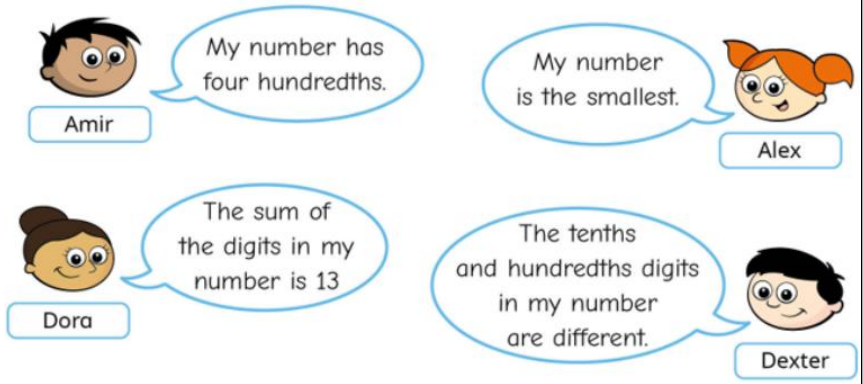
Year 6 Maths Challenge

Last term (Y6 Spring term)

Decimals

0.454 | 0.44 | 0.445 | 0.345

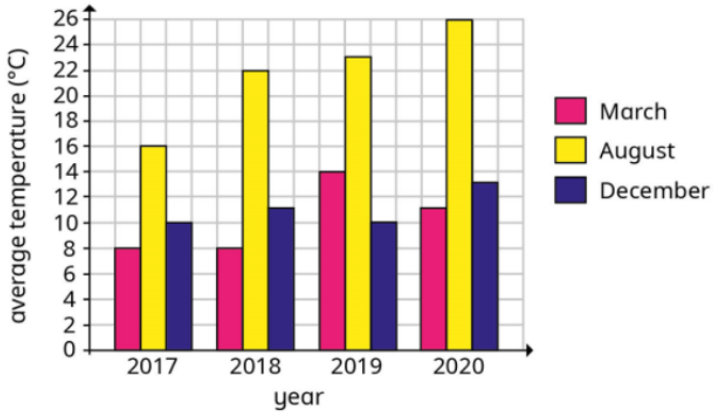
The children are each thinking of a different decimal number.



Match each number to the correct child.

Previous learning…Statistics

The bar chart shows the average temperature in a UK city.



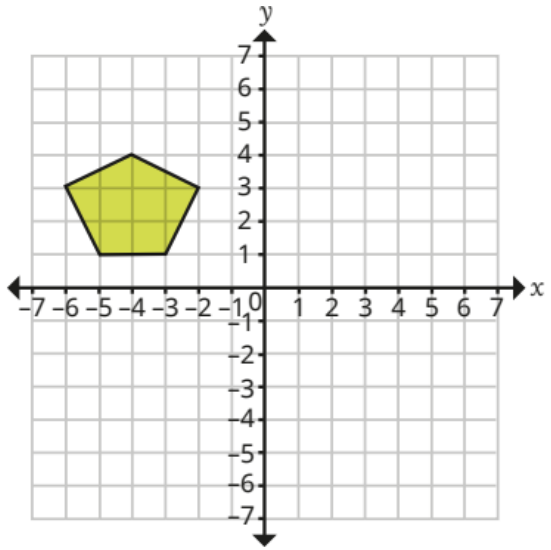
Summarise what the chart tells you.

What questions could you ask a partner about this chart?

We are currently learning…reflection

- Reflect this shape in the x-axis and in the y-axis.

  What do you notice about the reflections?



We are learning next..

Practise arithmetic questions, times tables, number bonds, x, divide by 10, 100, 1000

☺

Week 6

Year 6 Maths Challenge

Last term (Y6 Spring term) Decimals.

Which is the odd one out?

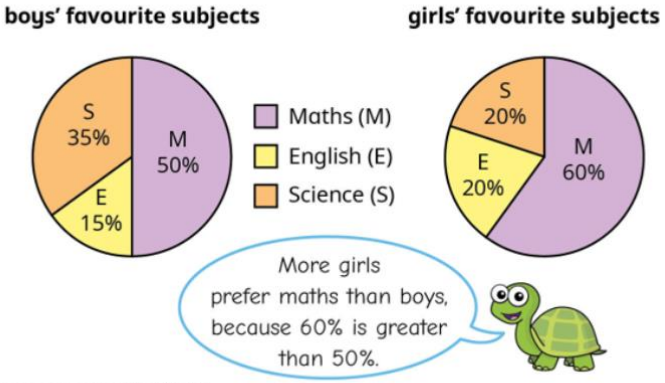
A	2 + 0.1 + 0.02 + 0.003
B	1 + 1.1 + 0.02 + 0.003
C	2 + 1.1 + 0.03
D	2 + 0.1 + 0.01 + 0.013
E	2 + 0.1 + 0.023

Explain your answer.

Create your own question like this for a partner.

Previous learning…Statistics

120 boys and 100 girls were asked to name their favourite subject.
The results are shown in the pie charts.



Do you agree with Tiny?
Explain your answer.

We are currently learning

SATs Week! Do your best, Year 6!

We are learning next

Projects which have been designed to explore maths in real life contexts, allowing children to see how important maths is in all aspects of life. As well as this we have looked to provide cross curricular links where appropriate, for example, including tasks that develop design and technology skills and geographical knowledge. They also provide a great opportunity to explore and develop enterprise.

Week 7

Year 6 Maths Challenge

Last term (Y6 Spring term) FDP

Write a fraction, decimal and percentage that could complete the comparison.

$\frac{3}{5} < \square < \frac{4}{5}$

Previous learning… The mean

- Mum is 48 years old.
- Scott is 4 years older than James.
- James is 7 years older than Esme.

The average age of pairs of family members are shown.

Mum, Dad — mean age of 50

Scott, James — mean age of 13

Anna, Esme — mean age of 6

Work out the age of each member of the family.
Work out the mean age of the whole family.

We are currently learning…

Projects which have been designed to explore maths in real life contexts, allowing children to see how important maths is in all aspects of life. As well as this we have looked to provide crosscurricular links where appropriate, for example, including tasks that develop design and technology skills and geographical knowledge. They also provide a great opportunity to explore and develop enterprise.

We are learning next

Projects which have been designed to explore maths in real life contexts, allowing children to see how important maths is in all aspects of life. As well as this we have looked to provide cross curricular links where appropriate, for example, including tasks that develop design and technology skills and geographical knowledge. They also provide a great opportunity to explore and develop enterprise.