WB: 23/2/26

Year 6 Maths Challenge

Last term (Y6 Autumn term)

Work out the multiplications.

17 × 562	23 × 3,164	41 × 5,312

Huan receives a new comic book every month.

Each book has 36 pages.

He reads a comic book once a month for 6 years.

How many pages does Huan read altogether?

Previous learning... x by 10, 100, 1000

Fill in the missing numbers.

input				output
0.15	× 100		× 10	
	× 10	0.09	× 10	
0.365		3.65	× 1,000	
				5,490

0.32 × 1,000

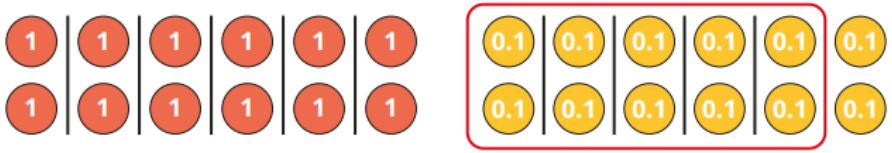
0.298 × 1,000

1.045 × 1,000

5.407 × 1,000

We are currently learning... x decimals by integers

- Dora uses place value counters to show that 6 lots of 2 is 12, and 6 lots of 0.2 is 1.2



6 × 2 = 12

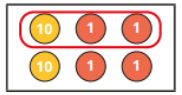
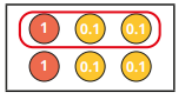
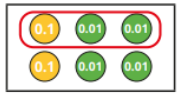
6 × 0.2 = 1.2

Use Dora's method to complete the calculations.

▶ 4 × 2	▶ 5 × 5	▶ 3 × 4	▶ 12 × 3
4 × 0.2	0.5 × 5	3 × 0.4	1.2 × 3

We are learning next...÷ decimals by integers

- Dani, Mo and Kim use place value counters to work out divisions.

Dani	Mo	Kim
		
24 ÷ 2 = 12	2.4 ÷ 2 = 1.2	0.24 ÷ 2 = 0.12

What is the same about their divisions?

What is different about their divisions?

▶ 4 ÷ 2	▶ 9 ÷ 3	▶ 36 ÷ 6	▶ 15 ÷ 3
0.4 ÷ 2	0.09 ÷ 3	3.6 ÷ 6	0.15 ÷ 3

WB: 2/3/26

Year 6 Maths Challenge

Last term (Y6 Autumn term)

- 1,480 pencils are grouped into packets of 5

  How many groups of 5 pencils are there?

- 650 children from a school go to a theme park.

  On the first ride, each car seats 4 children.

  How many cars are needed for the whole school to go on the first ride?

  On the second ride, each car seats 6 children.

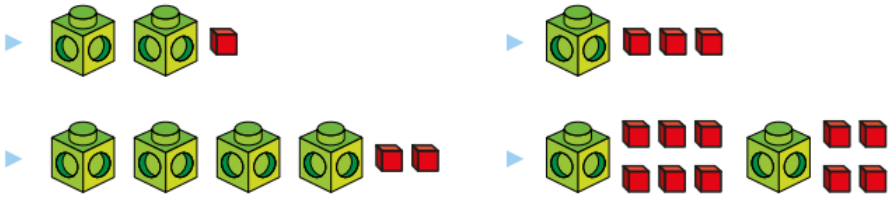
  How many cars are needed for the whole school to go on the second ride?

Previous learning. . .Substitution

- Ann gives values to these cubes.

  = 5 = 1

  Work out the values of the sets of cubes.



We are currently learning. . .Fractions as division

- Write each fraction as a division.
  - $\frac{3}{4}$
  - $\frac{7}{9}$
  - $\frac{112}{137}$

  Write each division as a fraction.
  - $2 \div 3$
  - $5 \div 8$
  - $24 \div 35$

We are learning next. . .Order fractions, decimals and percentages

- Teddy knows that $\frac{11}{20}$ is greater than a half and 42% is less than a half because it is less than 50%, so $\frac{11}{20}$ is greater than 42%.

  Use Teddy's method to write "greater" or "less" to complete the sentences.
  - 0.45 is _____ than $\frac{16}{30}$
  - $\frac{251}{500}$ is _____ than 15%.
  - 50% is _____ than 0.309
  - $\frac{13}{24}$ is _____ than 0.5

WB: 9/3/26

Year 6 Maths Challenge

Last term (Y6 Autumn term)

836 ÷ 11	798 ÷ 14	608 ÷ 19

- A farmer packs 8,280 eggs into cartons of 24

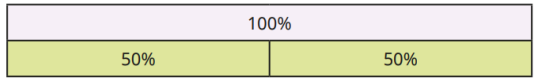
  Use long division to find the number of cartons needed.

  Check your answer by dividing by factors.

Previous learning...

Percentage of amounts

- There are two lots of 50% in 100%.

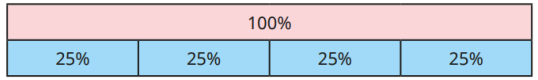


This means that to find 50% of an amount, you divide it by 2

Work out 50% of each number.

240	360	170	1

- There are four lots of 25% in 100%.



This means that to find 25% of an amount, you divide it by 4

Work out 25% of each number.

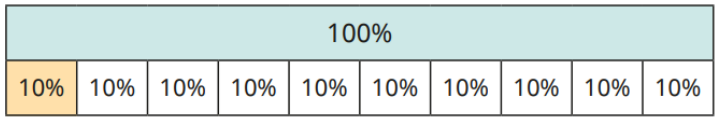
240	360	170	1

What do you notice about your answers?

Why does this happen?

We are currently learning...Percentages (missing values)

- If you know 10% of a number, you can multiply by 10 to find the whole.



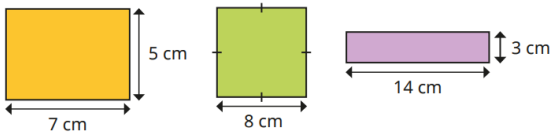
Work out the missing numbers.

- 10% of _____ = 2.8
- 10% of _____ = 709
- 10% of _____ = 45p
- 10% of _____ = 38 g

- If 50% of a number is 123, what is the number?
- If 25% of a number is 45, what is the number?
- If 20% of a number is 70, what is the number?

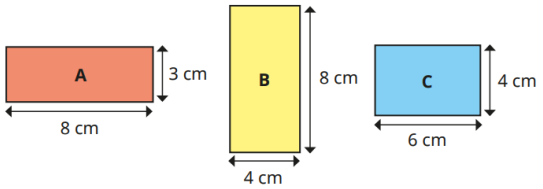
We are learning next...Area

- Find the areas of the rectangles.



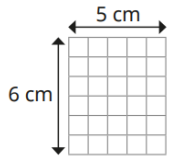
Explain your method to a partner.

- Which two rectangles have the same area?



How do you know?

- Complete the sentences to describe the rectangle.



The length of the rectangle is _____ cm.

The width of the rectangle is _____ cm.

The total number of squares in the rectangle is _____

The area of the rectangle is _____ cm^2

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Year 6 Maths Challenge

Last term (Y6 Autumn term)

- Mrs Hall needs 380 cupcakes for a party.

  Cupcakes are sold in boxes of 15

  How many boxes of cupcakes does she need to buy?

  Will she have any cupcakes spare?
  How do you know?

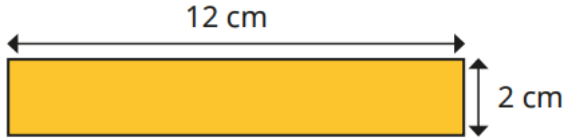
- One day, a bakery produces 7,849 biscuits.

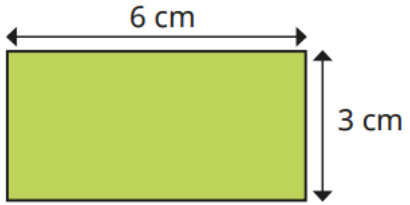
  The biscuits are packed into boxes of 64 biscuits.

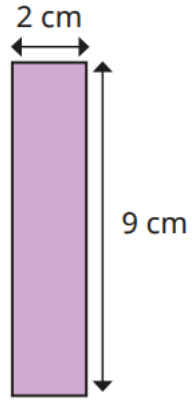
  How many full boxes can be packed?

Previous learning. . .Area and perimeter

- Find the area and perimeter of each rectangle.

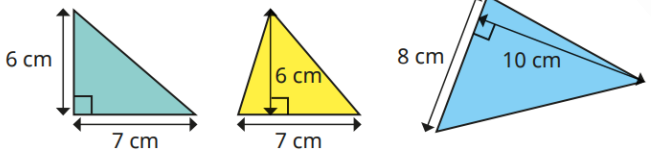






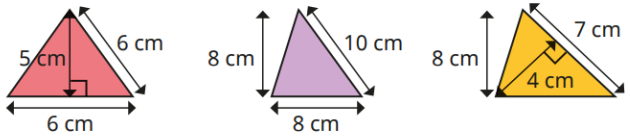
We are currently learning. . .Area of triangles

- Work out the areas of the triangles.



What is the same and what is different about the first two triangles?

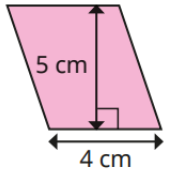
- Find the area of each triangle.



Use the formula area = $\frac{1}{2}$ × base × perpendicular height to work out the area of the triangle.

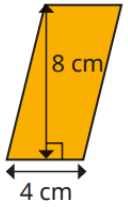
We are learning next. . .Area of parallelograms

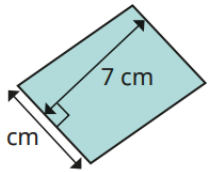
- Annie has worked out the area of this parallelogram.

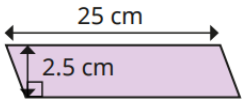


area = base × perpendicular height
= 4 cm × 5 cm
= 20 cm²

Use Annie's method to find the areas of the parallelograms.







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Year 6 Maths Challenge

Last term (Y6 Autumn term)

- Work out the calculations.

$6 \times 4 + 5 \times 2$	$6 \times 4 - 5 \times 2$	$6 \times (4 + 5) \times 2$

- Dani has 7 bags with 5 sweets in each bag.
  She adds one more sweet to each bag.
  Which calculation shows how many sweets there are in total?

$7 \times (5 + 1)$	$7 \times 5 + 1$

- Work out the calculations.

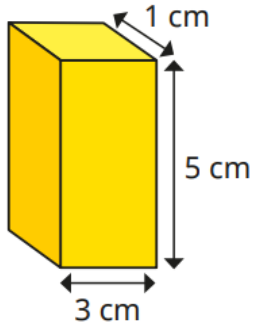
$6^2 - 3 \times 4$	$6^2 \div (4 + 5)$	$(7 - 4)^2$

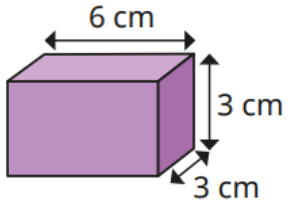
Previous learning. . .Volume of cuboids

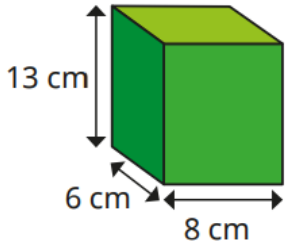
Here is the formula for the volume of a cuboid.

volume = length × width × height

- Find the volumes of the cuboids.







We are currently learning. . .

- Some children in a class were asked to name their favourite sport.
  The results are shown in the pie chart.

Write **more** or **less** to complete the sentences.

- _____ than half of the class have cricket as their favourite sport.
- _____ than a quarter of the class have football as their favourite sport.

We are learning next. . .The mean

mean = total number ÷ number of items

- Here are the number of runs Jack scored in seven cricket matches.

134, 60, 17, 63, 38, 84, 10

Calculate the mean number of runs Jack scored in a match.

- The amount of money raised for charity by five children is shown in the table.

Child	Amount raised
Aisha	£24.55
Sam	£29.60
Tommy	£40
Filip	£21.20
Scott	£19.65

What is the mean amount of money raised by the children?