

White

**Rose
Maths**

Year 4 - Autumn - Block 4

Multiplication & Division

Always, Sometimes, Never

If you write a whole number in a place value grid and multiply it by 10, all the digits move one column to the left.

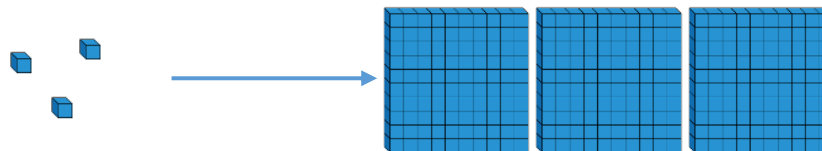
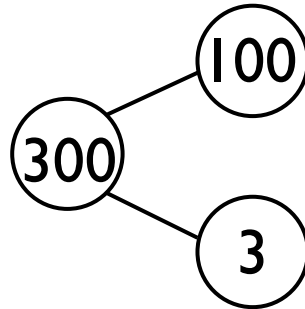
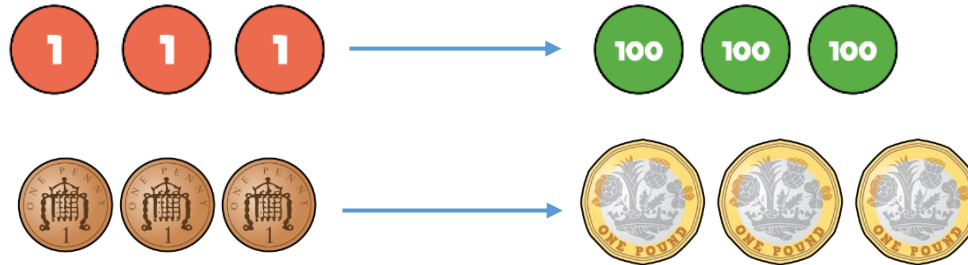
Annie has multiplied a whole number by 10

Her answer is between 440 and 540

What could her original calculation be?

How many possibilities can you find?

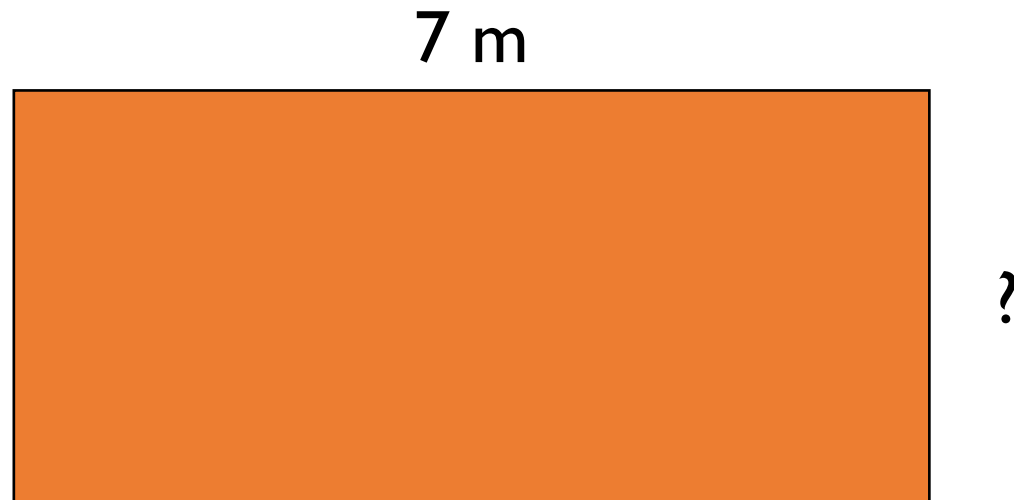
Which representation does **not** show multiplying by 100? Explain your answer.



The perimeter of the rectangle is 26 m.

Find the length of the missing side.

Give your answer in cm.



Four children are in a race. The numbers on their vests are:

350	35
3,500	53

Use the clues to match each vest number to a child.

- Jack's number is ten times smaller than Mo's.
- Alex's number is not ten times smaller than Jack's or Dora's or Mo's.
- Dora's number is ten times smaller than Jack's.

While in Wonderland, Alice drank a potion and everything shrank. All the items around her became ten times smaller! Are these measurements correct?

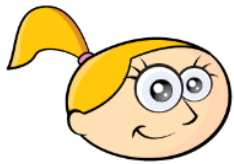
Item	Original measurement	After shrinking
Height of a door	220 cm	2,200 cm
Her height	160 cm	16 cm
Length of a book	340 mm	43 mm
Height of a mug	220 mm	?

Can you fill in the missing measurement?

Can you explain what Alice did wrong?

Write a calculation to help you explain each item.

Eva and Whitney are dividing numbers by 10 and 100
They both start with the same 4-digit number.
They give some clues about their answer.



Eva

My answer has 8 ones
and 2 tens.

My answer has 2
hundreds, 8 tens and 0
ones.



Whitney

What number did they both start with?
Who divided by what?

Use the digit cards to fill in the missing digits.



$$170 \div 10 = \underline{\quad} \underline{\quad}$$

$$\underline{\quad}20 \times 10 = 3,\underline{\quad}00$$

$$1,8\underline{\quad}0 \div 10 = 1\underline{\quad}6$$

$$\underline{\quad}9 \times 100 = 5,\underline{\quad}00$$

$$6\underline{\quad} = 6,400 \div 100$$

Which answer could be the odd one out?
What makes it the odd one out?

$$3 + 0 = \underline{\quad}$$

$$3 - 0 = \underline{\quad}$$

$$3 \times 0 = \underline{\quad}$$

Explain why the answer is different.

Circle the incorrect calculations and write them correctly.

$$5 \times 0 = 50$$

$$19 \times 1 = 19$$

$$7 \times 0 = 7$$

$$1 \times 1 = 2$$

$$0 \times 35 = 0$$

$$0 \times 0 = 1$$

$$1 \times 8 = 9$$

Choose one calculation and create a drawing to show it.

Use $<$, $>$ or $=$ to complete the following:

$$8 \div 1 \bigcirc 7 \div 1$$

$$6 \div 6 \bigcirc 5 \div 5$$

$$4 \div 4 \bigcirc 4 \div 1$$

Draw an image for each one to show that you are correct.

Mo says,



25 divided by 1 is
equal to 1 divided by
25

Do you agree?

Explain your answer.

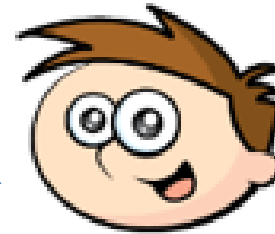
Always, Sometimes, Never

When you multiply any whole number by 6 it will always be an even number.

Explain your answer.

Teddy says,

If
 $6 \times 12 = 72$
then
 $12 \div 6 = 72$



Is Teddy correct?

Explain your answer.

I am thinking of 2 numbers where the sum of the numbers is 15 and the product is 54

What are my numbers?

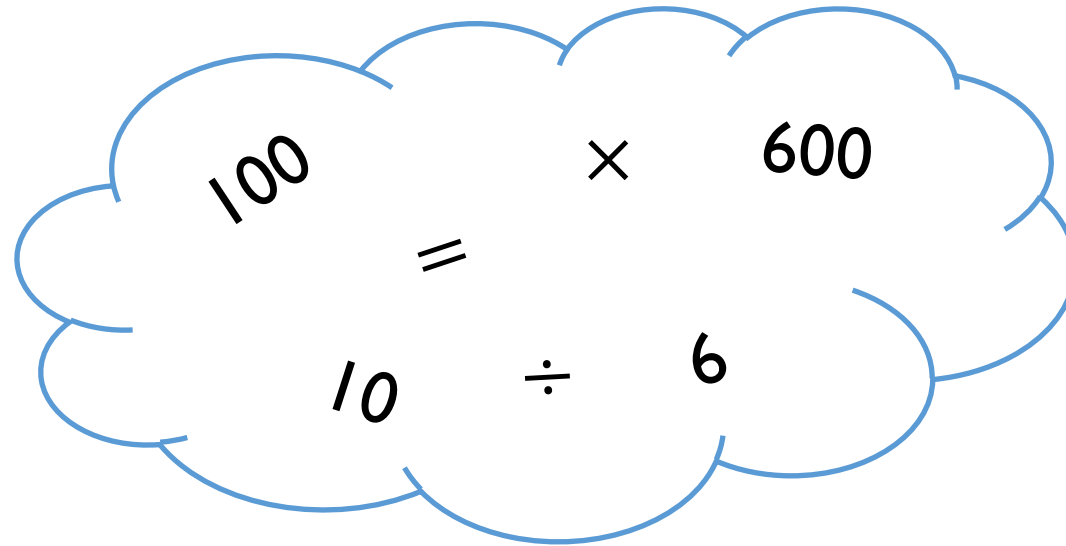
Think of your own problem for a friend to solve?

Always, Sometimes, Never

If a number is a multiple of 3 it is also a multiple of 6

Explain why you think this.

Choose the correct number or symbol from the cloud to fill in the boxes.



$$\underline{\quad} \div \underline{\quad} = 6$$

$$60 = 600 \underline{\quad} 10$$

True or False?

$$6 \times 9 = 9 \times 3 \times 2$$

$$9 \times 6 = 3 \times 9 + 9$$

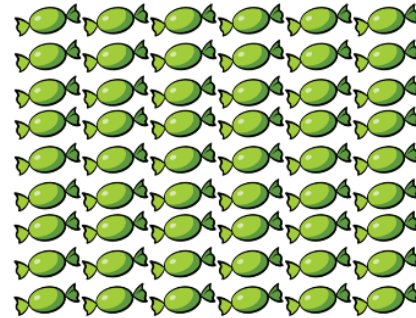
Explain your answer.

Amir and Whitney both receive some sweets.



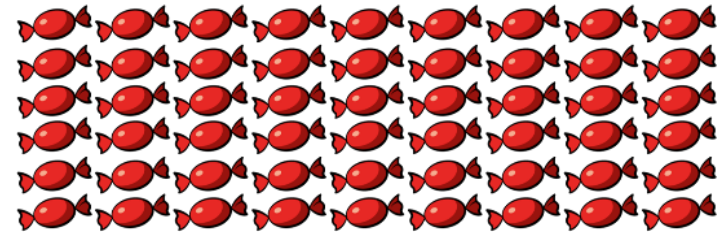
Amir

I have more sweets because I have more rows.



Whitney

I have more sweets because I have more in each row.



Who has more sweets? Explain your reasoning.

Can you complete the calculations using some of the symbols or numbers in the box?

\div	9	100	
10	900		=

$$\underline{\quad} \div \underline{\quad} = 9$$

$$90 = 900 \underline{\quad} 10$$

Mrs White's class are selling tickets at £2 each for the school play.

The class can sell one ticket for each chair in the hall.

There are 7 rows of chairs in the hall. Each row contains 9 chairs.

How much money will they make?

What do you notice about the pattern when counting in 7s from 0?

Does this continue beyond 7 times 12?

Can you explain why?

In which other times tables will you see the same pattern?

True or False?

$$7 \times 6 = 7 \times 3 \times 2$$

$$7 \times 6 = 7 \times 7 + 8$$

Explain your answer to a friend. Prove using a drawing.

Children were arranged into rows of seven.
There were 5 girls and 2 boys in each row.



Use your times table knowledge to show how many girls would be in 10 rows and in 100 rows.

Show as many number sentences using multiplication and division as you can which are linked to this picture.

How many children in total are there in 200 rows?
How many girls? How many boys?