White Rose Maths

Year 5

Multiplication & Division

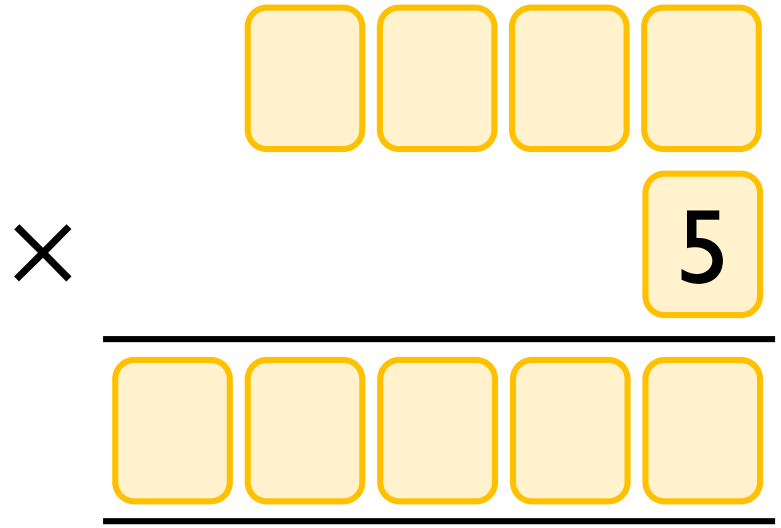
Alex calculated 1,432 × 4
Here is her answer.

	Th	H	T	O
	1	4	3	2
×				4
	4	16	12	8

$$1{,}432 \times 4 = 416{,}128$$

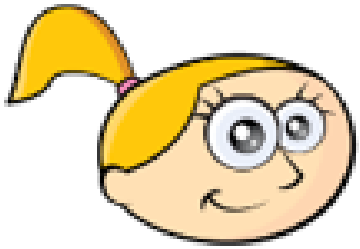
Can you explain what Alex has done wrong?

Can you work out the missing numbers using the clues?



- The 4 digits being multiplied by 5 are consecutive numbers.
- The first 2 digits of the product are the same.
- The fourth and fifth digits of the answer add to make the third.

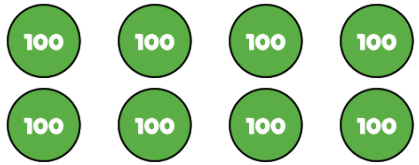
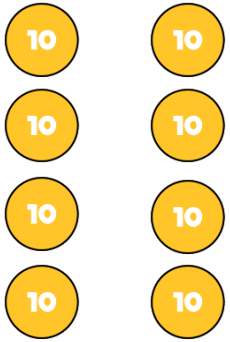
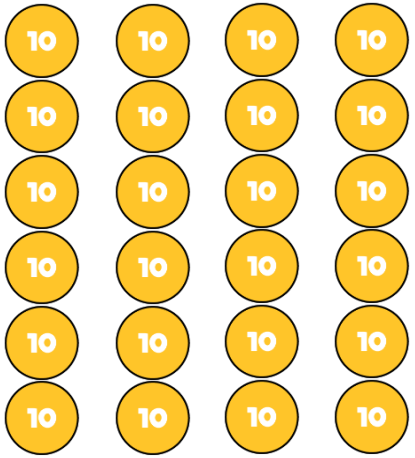
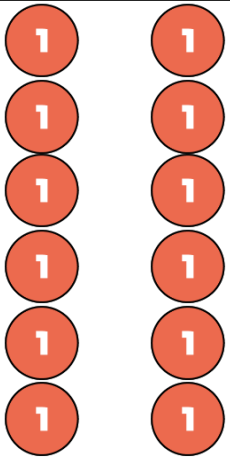
Eva says,



To multiply 23 by 57 I just need to calculate 20×50 and 3×7 and then add the totals.

What mistake has Eva made?
Explain your answer.

Amir hasn't finished his calculation. Complete the missing information and record the calculation with an answer.

×	40	2
40		
6		

Farmer Ron has a field that measures 53 m long and 25 m wide.

Farmer Annie has a field that measures 52 m long and 26 m wide.

Dora thinks that they will have the same area because the numbers have only changed by one digit each.

Do you agree? Prove it.

Tommy says,

It is not possible to make 999 by multiplying two 2-digit numbers.

Do you agree?
Explain your answer.

Amir has multiplied 47 by 36

		4	7
×		3	6
	2	8	2
	1	4	1
	3	2	3

Alex says,

Amir is wrong because the answer should be 1,692 not 323

Who is correct?

What mistake has been made?

$22 \times 111 = 2442$

$23 \times 111 = 2553$

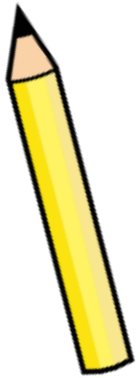
$24 \times 111 = 2664$

What do you think the answer to 25×111 will be?

What do you notice?

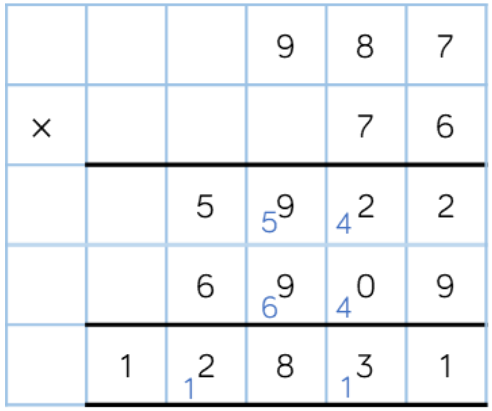
Does this always work?

Pencils come in boxes of 64
A school bought 270 boxes.
Rulers come in packs of 46
A school bought 720 packs.

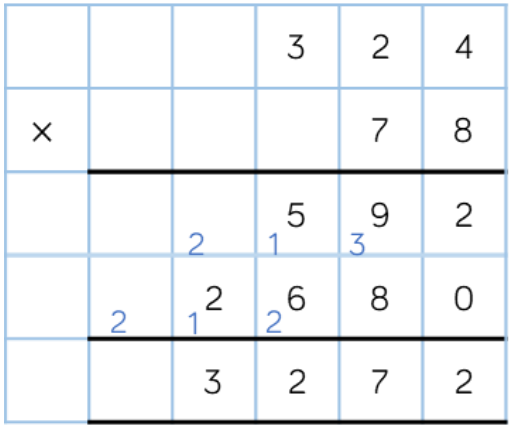


How many more rulers were ordered than pencils?

Here are examples of Dexter's maths work.



			9	8	7
×				7	6
		5	$^{5}9$	$^{4}2$	2
		6	$^{6}9$	$^{4}0$	9
	1	$^{1}2$	8	$^{1}3$	1



			3	2	4
×				7	8
		^{2}	$^{1}5$	$^{3}9$	2
	^{2}	$^{1}2$	$^{2}6$	8	0
		3	2	7	2

He has made a mistake in each question.

Can you spot it and explain why it's wrong?

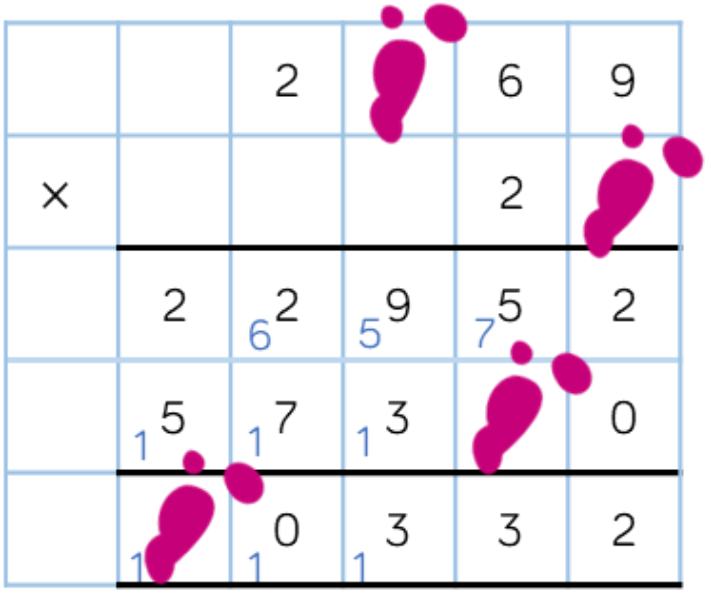
Correct each calculation.

Spot the Mistakes

Can you spot and correct the errors in the calculation?

		2	5	3	4
×				2	3
		$^{1}7$	5	$^{1}9$	2
		$^{1}5$	0	6	8
	1	2	$^{1}6$	$^{1}6$	0

Teddy has spilt some paint on his calculation.



		2		6	9
×				2	
	2	$^{6}2$	$^{5}9$	$^{7}5$	2
	$^{1}5$	$^{1}7$	$^{1}3$		0
	^{1}	0	$^{1}3$	3	2

What are the missing digits?

What do you notice?

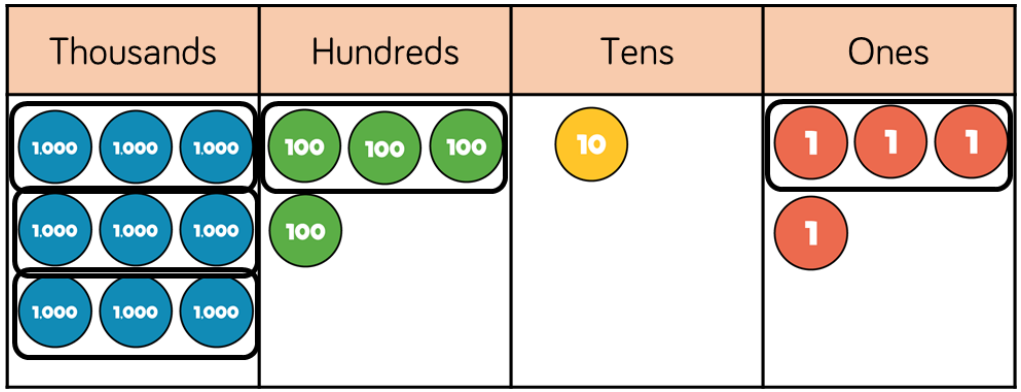
Jack is calculating 2,240 ÷ 7

He says you can't do it because 7 is larger than all of the digits in the number.

Do you agree with Jack?
Explain your answer.

Spot the Mistake

Explain and correct the working.



	3	1	0	1
3	9	4	1	4

I am thinking of a 3-digit number.

When it is divided by 9, the remainder is 3

When it is divided by 2, the remainder is 1

When it is divided by 5, the remainder is 4

What is my number?

Always, Sometimes, Never?

A three-digit number made of consecutive descending digits divided by the next descending digit always has a remainder of 1

$765 \div 4 = 191$ remainder 1

How many possible examples can you find?