




Multiplying and dividing using objects

For some pictorial ideas and help with formal written methods, see the videos in the lesson PowerPoint for some demonstrations from Miss B

You will need 3 sets of objects to represent hundreds, tens and ones. Miss B is using different types of pasta!

Hundreds	Tens	Ones
		

Multiplying 2-digit by 1-digit

1. Make a place value grid with the same number of rows as the 1-digit number that you are multiplying by.
2. Make your 2-digit number in every row.
3. Count up the total in each column. If there are more than 10 in a column, you need to exchange the ten for a 1 in the next column e.g. in the example there are 12 tens. 10 of those exchange for 1 hundred.

H	T	O
	4 tens, 1 one	
	4 tens, 1 one	
	4 tens, 1 one	

$3 \times 41 = 123$

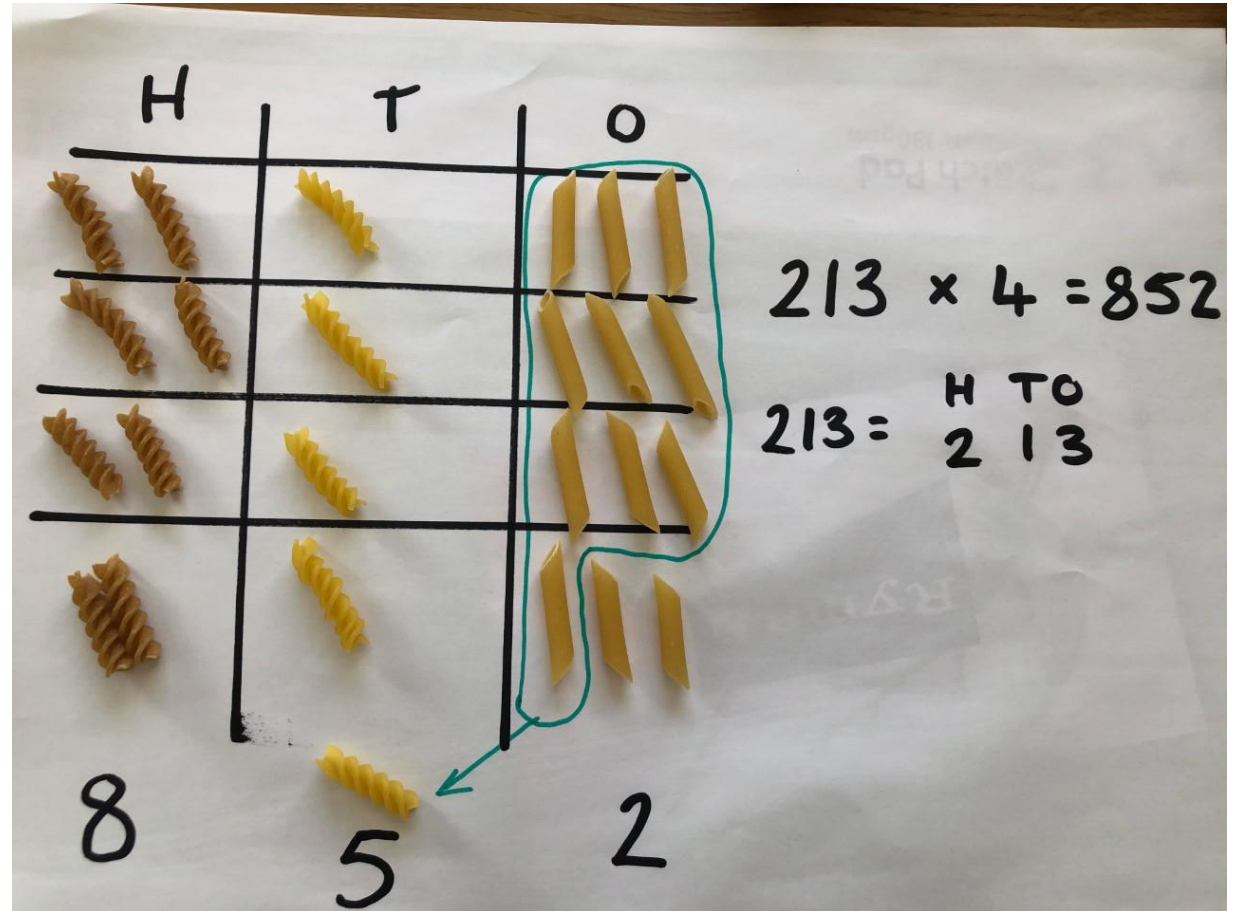
$41 = 4 \text{ tens, } 1 \text{ one}$

3 lots of 41 is
12 tens and 3
ones. 12 tens = 120

$120 + 3 = 123$

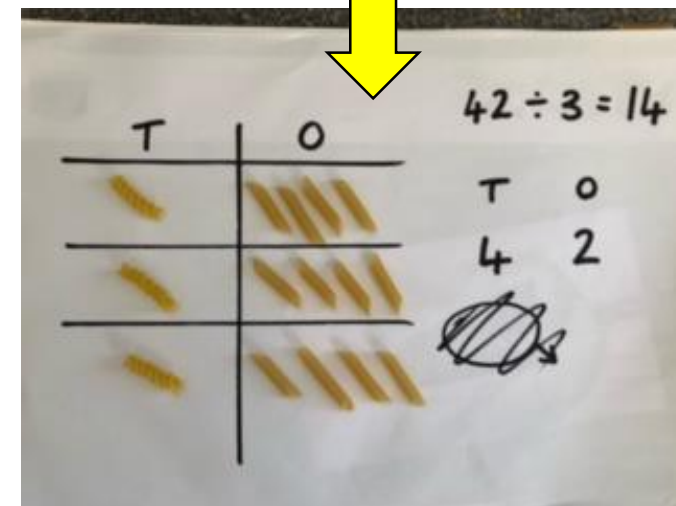
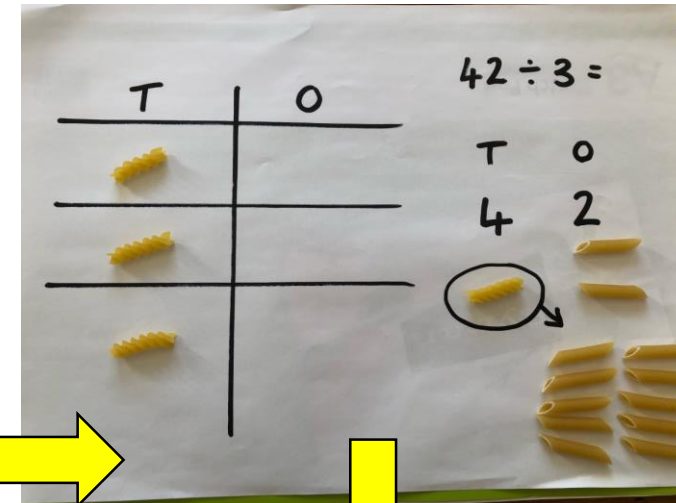
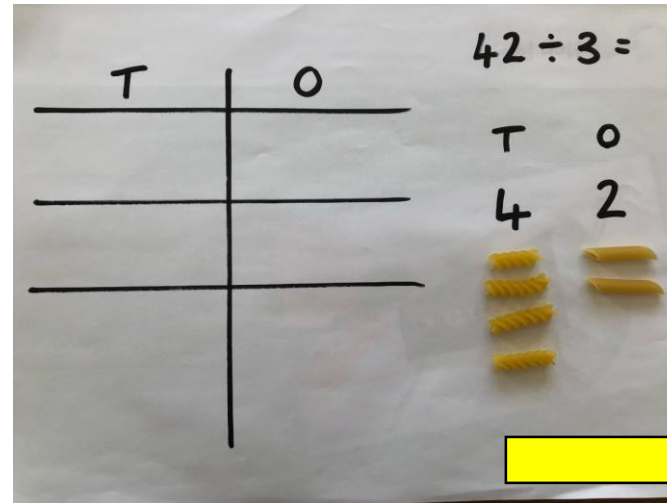
Multiplying 3-digit by 1-digit

1. Make a place value grid with the same number of rows as the 1-digit number that you are multiplying by.
2. Make your 3-digit number in every row.
3. Count up the total in each column. If there are more than 10 in a column, you need to exchange the ten for a 1 in the next column e.g. in the example there are 12 ones. 10 of those exchange for 1 ten.



Divide 2-digit by 1-digit (without remainder)

1. Make a place value grid with the same number of rows as the 1-digit number that you are dividing by.
2. Make your 2-digit number out of your objects.
3. Share out your tens. If you cannot share them out equally, exchange 1 ten for 10 ones.
4. Share out your ones.
5. Count the total in each row.



Divide 2-digit by 1 digit (with remainder)

1. Make a place value grid with the same number of rows as the 1-digit number that you are dividing by.
2. Make your 2-digit number out of your objects.
3. Share out your number equally until you cannot share equally any more.
4. Count how many in each row.
5. Count how many are left over that couldn't be shared. This is the remainder.

