




Multiplication and division

Concrete and pictorial prompts

(also see videos in lesson PowerPoints for examples of Miss B demonstrating formal written methods and some more pictorial work)

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

Hundreds	Tens	Ones
		

Multiply a 2 digit number by a 1 digit number

$3 \times 41 = 123$

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

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

$120 + 3 = 123$

H	T	O
	4 tens rods	1 one rod
	4 tens rods	1 one rod
	4 tens rods	1 one rod

1 2 3

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 each row.
3. Count up the amount in each row. If a column has more than ten, exchange ten from the column for one in the next column e.g. in the examples 10 tens have been exchanged for 1 hundred.

Multiply a 3 digit number by a 1 digit number

H **T** **O**

2 hundreds	1 ten	3 ones
2 hundreds	1 ten	3 ones
2 hundreds	1 ten	3 ones
2 hundreds	1 ten	3 ones

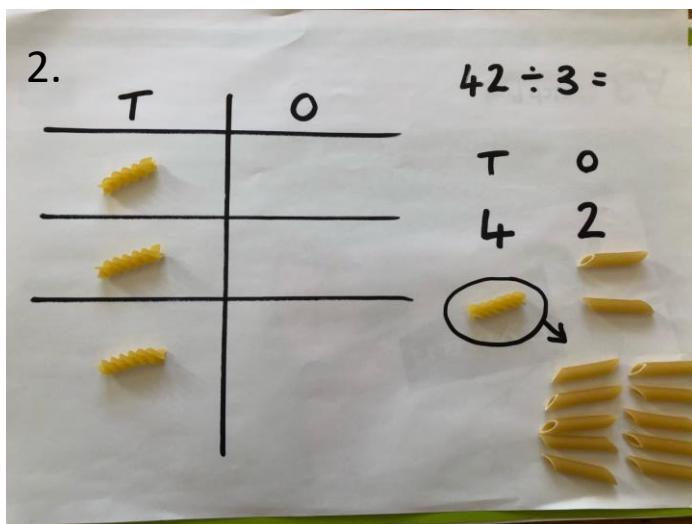
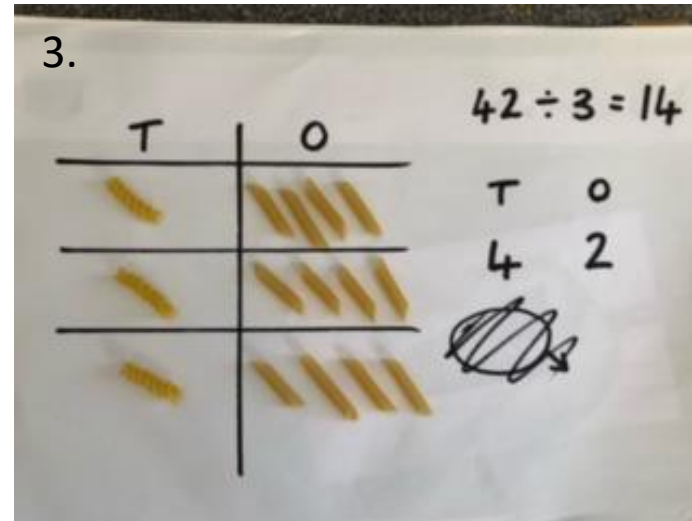
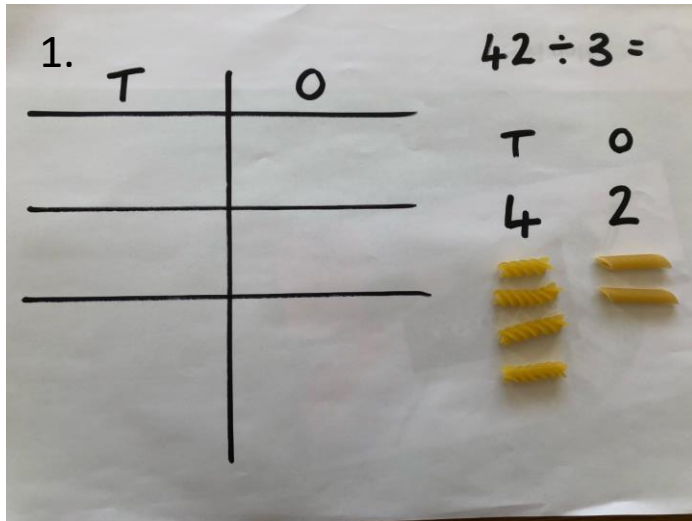
213 × 4 = 852

213 = **H** **T** **O**
 2 **1** **3**

8 **5** **2**

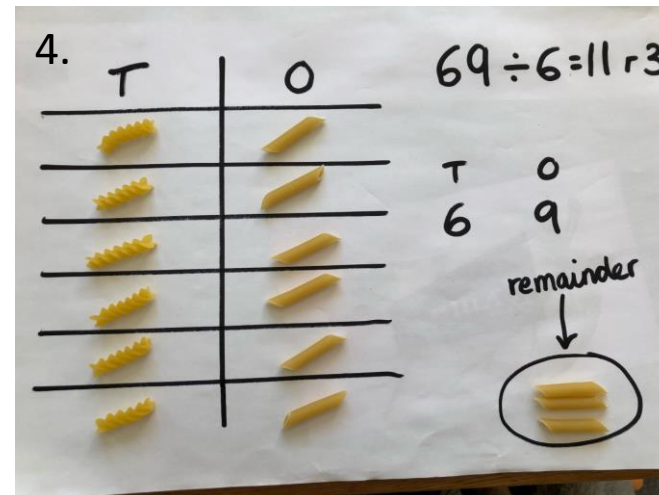
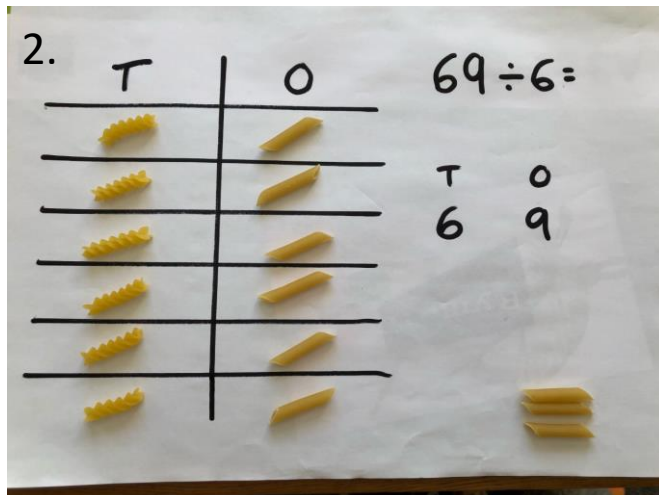
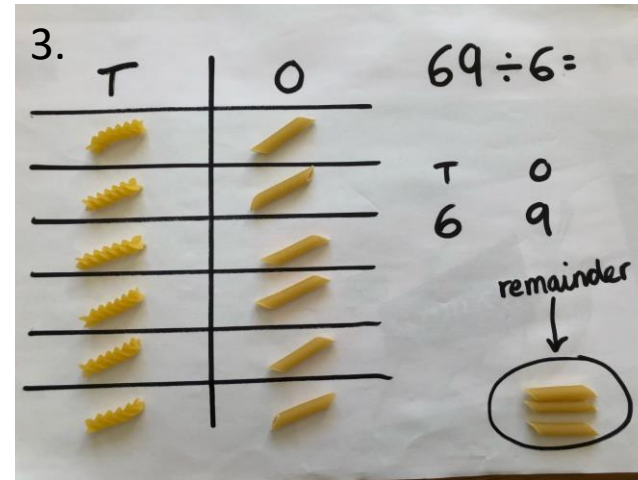
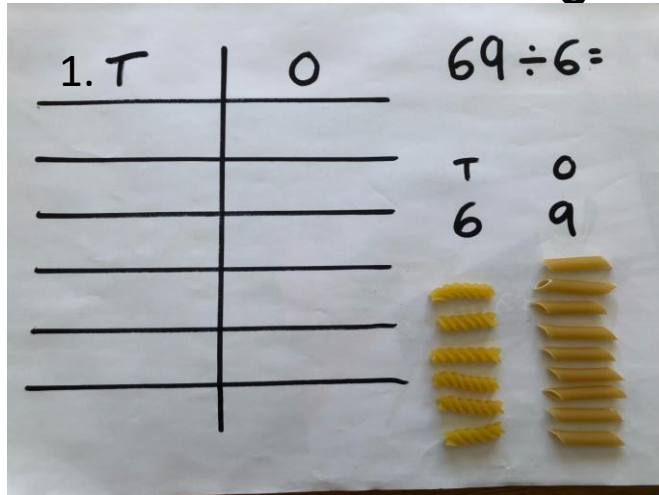
1. Make a place value grid with the same number of rows as the 1-digit number that you are multiplying by.
2. Make your 3-digit number in each row.
3. Count up the total in each column. If there are 10 or more you will need to exchange to 1 in the next column. e.g. in the example there were 12 ones. 10 of these become 1 ten, meaning that there are 5 tens in total and 2 ones.

Divide a 2-digit number by a 1-digit number



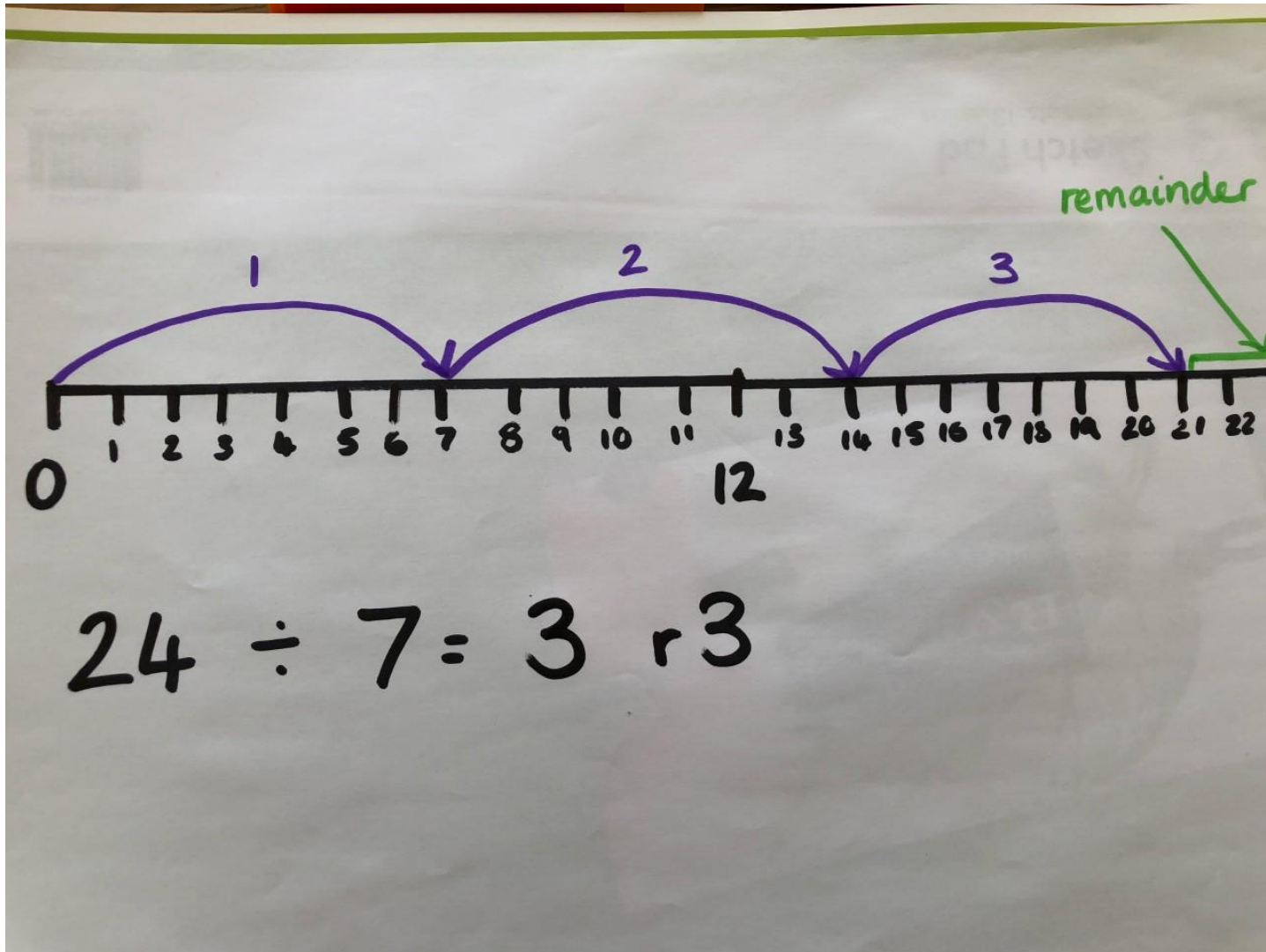
1. Make a place value grid with the same number of rows as the 1-digit number that you are dividing by.
2. Make your number using objects.
3. Share out your tens equally. If you have some left over that you can't share, exchange 1 of your tens for 10 ones.
4. Share out the ones.

Divide a 2-digit number by a 1-digit number, with remainder



1. Make the number using your objects.
2. Make a tens and ones column with the same number of rows as the number you are dividing by.
3. Share out your number. Every group has to be equal!
4. If you have anything left over, this is your remainder.

Divide a 2-digit number by a 1-digit number, with remainder



1. Make a number line with the number that you are dividing at the far end.
2. Do as many jumps of the number that you are dividing by as you can without going off your number line.
3. Count how many spaces there are between your last jump and the end of the number line. That is your remainder.