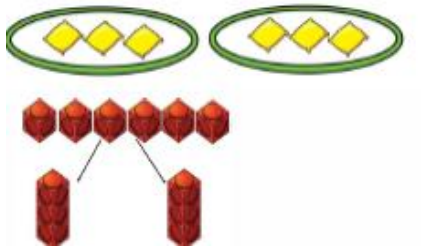
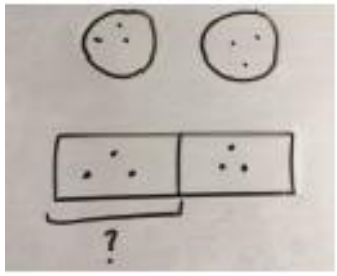
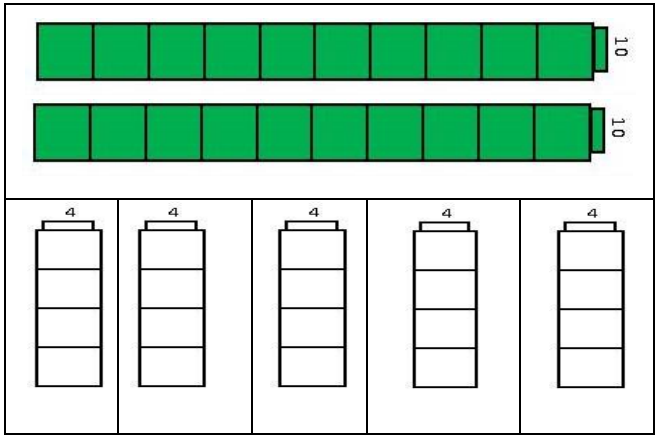
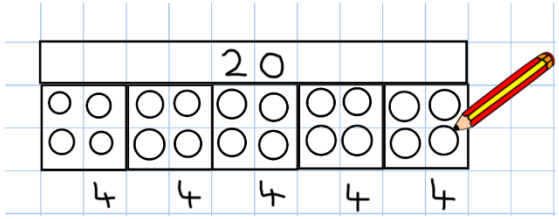
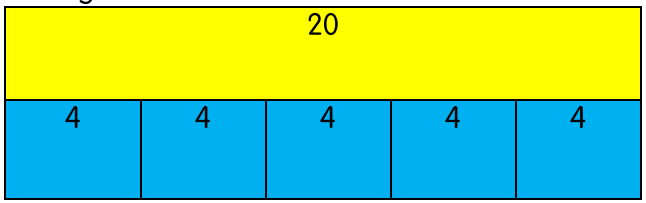
Calculation policy: Division

Key language: share, group, divide, divided by half, equally.

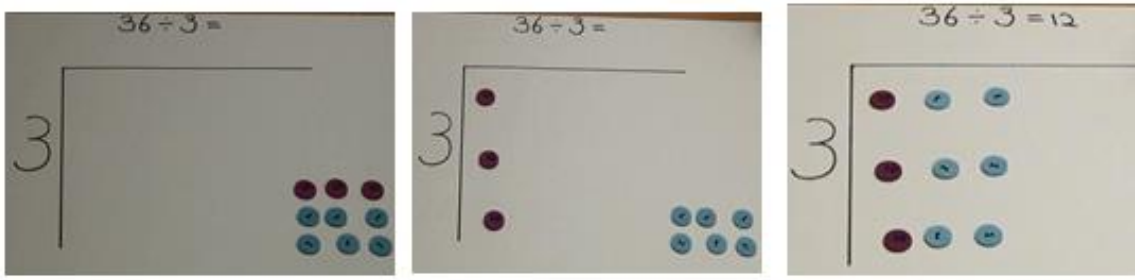
Concrete	Pictorial	Abstract
Sharing using a range of objects. Use hoops and plates to show the separate groups clearly. 6÷2= 	Represent sharing pictorially. Note the start of the bar model below. 6 ÷2 = 3 	6÷2=3 Children should also be encouraged to use their 2 times tables facts.
Use concrete resources to demonstrate the bar model. 20 ÷5=  This shows arrays.	Bar Model using known multiplication facts. e.g. 20 ÷5 = 4  Moving to this:  The parts can be shown as ? for the children to calculate. Think of the bar as a whole. Split the bottom bar into the number of groups you are dividing by and calculate how many would be in each group. Use table facts.	Pose 20 ÷5 = As; How many groups of 5 are there in 20? Remind children to use tables facts.

36÷3 =

This could be demonstrated with concrete resources (base10 or place value counters) and drawn pictorially (using dots for ones, lines for tens and squares for hundreds).

1. Using the place value counter, share out the 3 tens between 3 lines. This can be done equally.
2. Now share out the 6 ones between the 3 lines.
3. Count up the amount of place value counters in a line to give the answer.

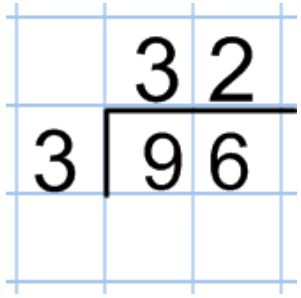
Stem sentences – 'I have divided 36 into 3 lines of 1 ten and24 ones. So, 36 ÷ 3 = 12'



Limit numbers to **NO** remainders or no need to carrying. (each digit must be a multiple of the divisor) See below.

Say, How many 3's are in 9? (Remind children that this is actually 90).

How many 3's are in 6?

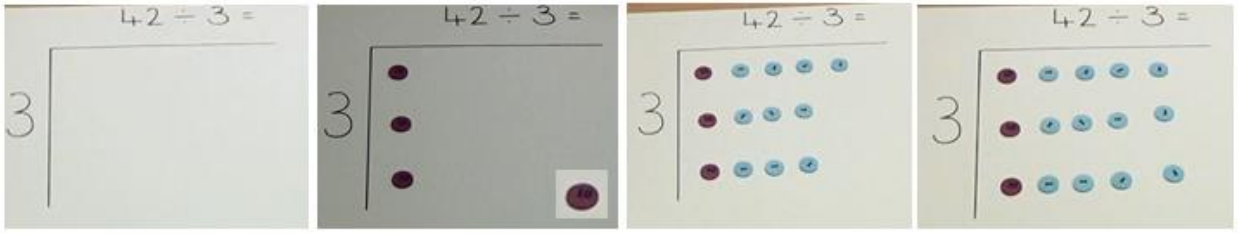


42 ÷ 3 =

A division question with a remainder. Can be drawn pictorially (using dots for ones, lines for tens and squares for hundreds).

1. Using the place value counter, share out the 4 tens between 3 lines. This cannot be done equally and so you will need to exchange a ten for 10 ones.
2. Now share out the 10 ones between the 3 lines.
3. Share out the ones (from the original 42).
4. Count up the amount of place value counters in a line to give the answer.

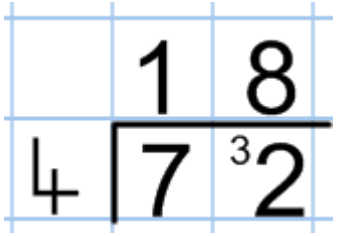
Stem sentences – 'I have divided 42 into 3 lines of 1 ten and 4 ones. So, 42 ÷ 3 = 14'



Stem sentence – 'Don't forget when you share, make it fair!'

Now move to a remainder within the calculation as shown below.

How many 4's are in 7 (1 with 3 left over. The remainder is recorded next to the next place value column.



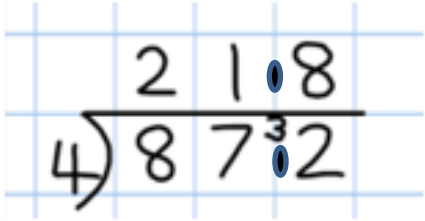
Next Step

Now move to 3 digit numbers e.g. 872 ÷4=

Next Step

Dividing Decimal Numbers without a remainder.

As above but children need to include the decimal point in their answer.



345÷15=

What can you multiply 15 by that is close to 345? 15 x 10 = 150

15 x 20 = 300

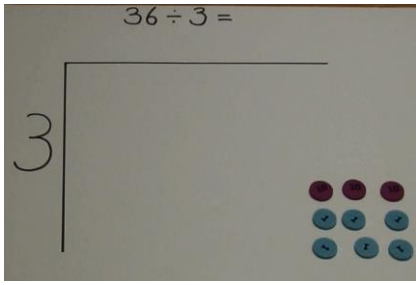
Subtract the multiple (300) and put the factor of 300 (20) in the multiply column

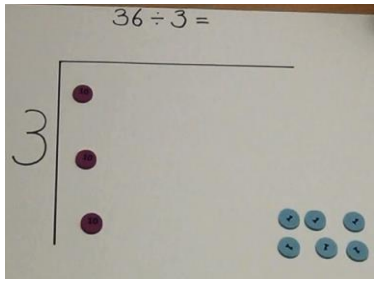
Repeat step one, but this time what can you multiply 15 by that is close to 45? 3x 15= 45

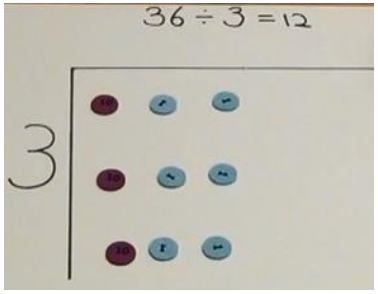
Repeat step 2

Your answer is the factors in the multiply column – 20 + 3 = 23

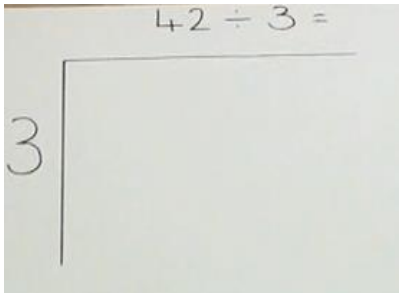
		0	2	3	X	
1	5	3	4	5		
	-	3	0	0	2	0
		0	4	5		
	-		4	5		3
			0	0		

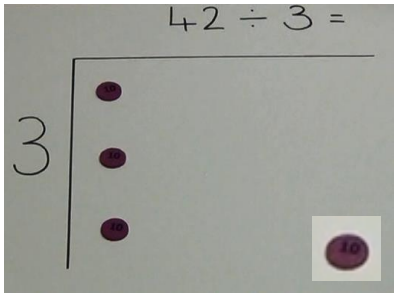


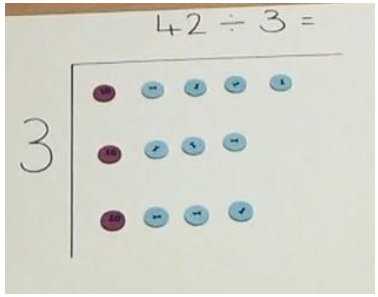


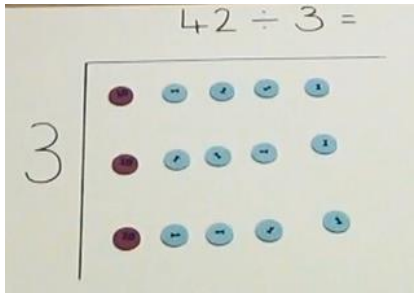


Stem sentences included









Stem sentences