

Year 2 Maths - The Four Operations

In year 2 children are expected to be able to add, subtract, multiply and divide.

- At school we have taught the children strategies to help them solve these types of problems. We would like to share these strategies with you so that you are able to support at home.**

Addition to 100.

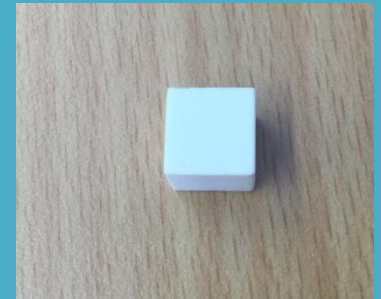
- When we first introduced adding to 100 to the children they were given practical resources.

We used base 10 resources...

**1 stick
represents
one set of
10**

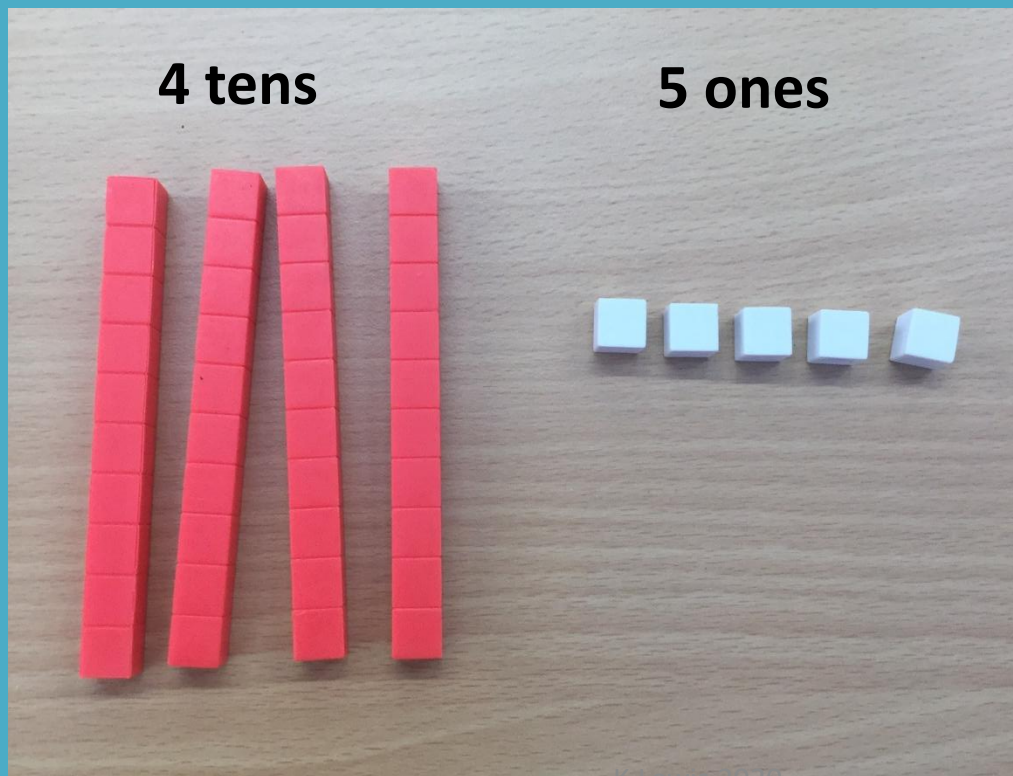


**1 cube
represents
one.**



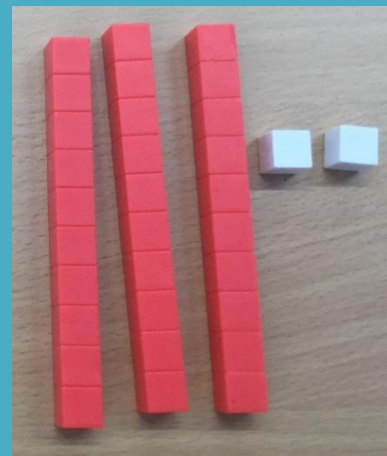
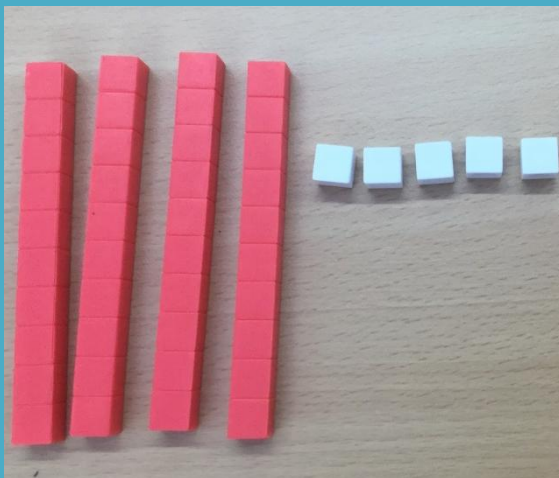
Addition to 100.

- So representing a 2 digit number such as **45** would look like this...



Addition to 100.

- If we give children an addition number sentence they can then work it out using these resources.
- $$45 + 32$$



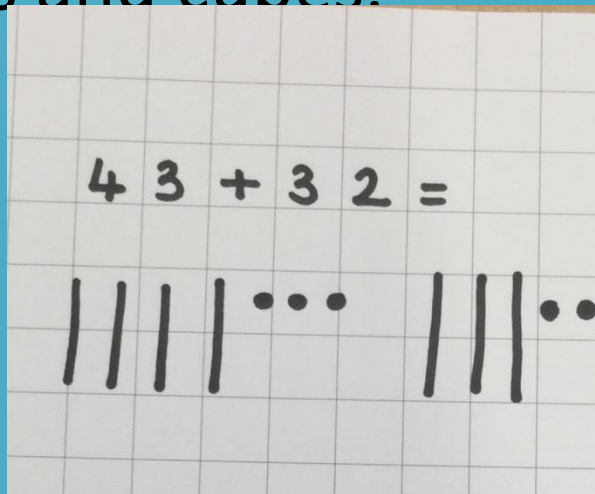
Count the tens first then the ones.

10,20,30,40,50,60,70 71,72,73,74,75,76,77 it's

77

Addition to 100.

- Now they are confident solving problems practically with the sticks and cubes, we have moved on and we now get them to draw the sticks and cubes.



The plastic ten sticks are drawn as sticks and the cubes are now dots.

We still count the tens first then the ones.

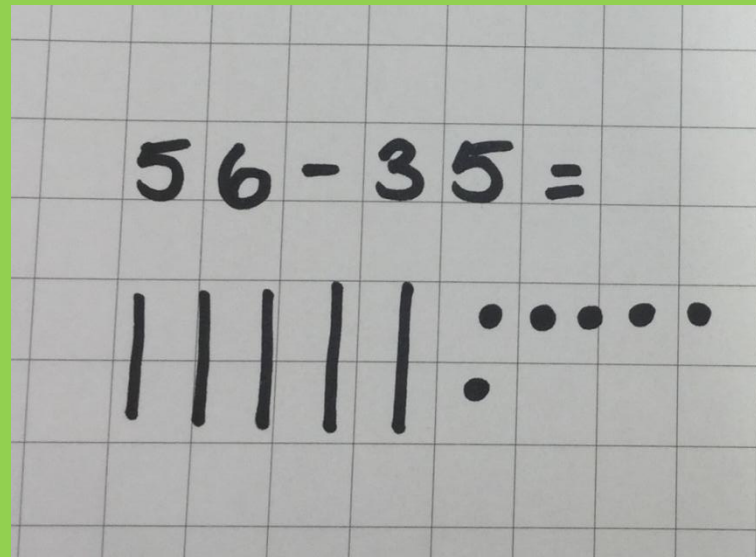
10,20,30,40,50,60,70 71,72,73,74,75 it's 75

Addition to 100.

- Now they have a simple strategy to solve any addition sum!
- Please use this approach at home when you are helping them. 😊

Subtraction to 100.

- We use the same approach to drawing out subtraction number sentences.



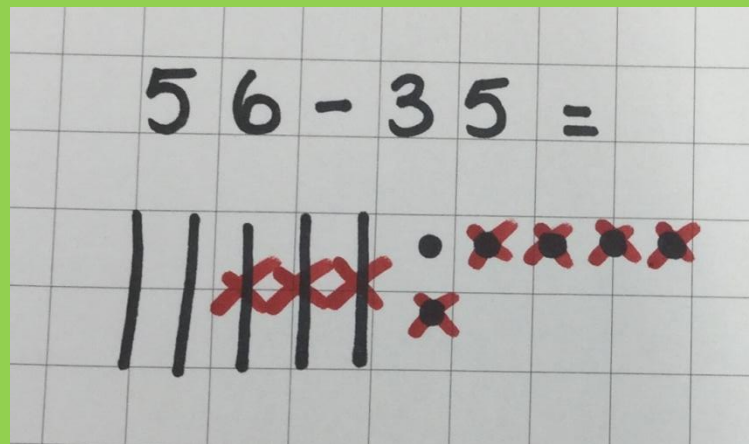
A photograph of a piece of white grid paper with a subtraction problem written in black ink. The problem is $56 - 35 =$. Below the equation, there are five vertical bars representing the number 56, followed by a colon and four dots representing the number 35. The entire expression is written on a grid background.

$$56 - 35 =$$

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Subtraction to 100.

- We draw the first amount out with sticks and dots but for subtraction we don't draw the second amount out... we take it away.

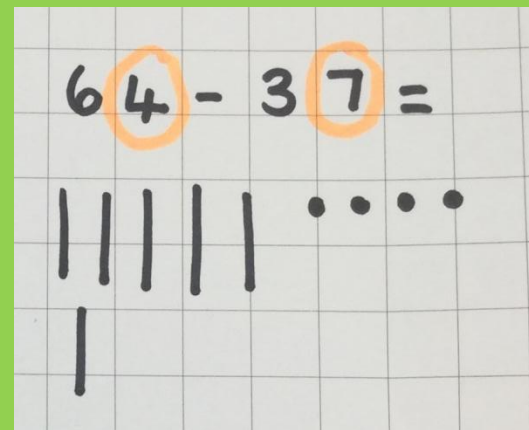
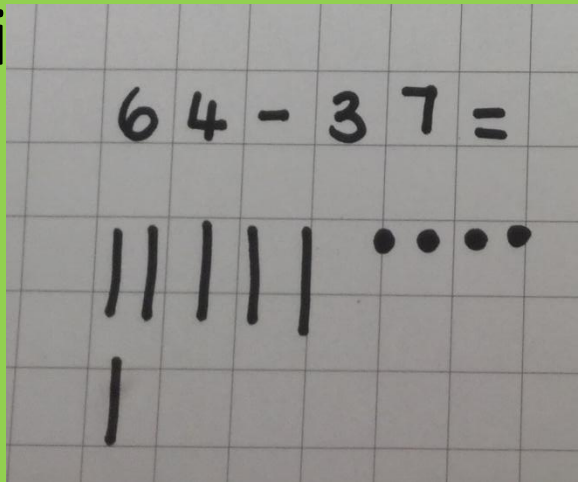


- Then we count what is left. Counting tens first and then the ones. “10, 20, 21, it’s 21”.

Subtraction to 100.

- It becomes a little more complicated when we are subtracting more ones than we have

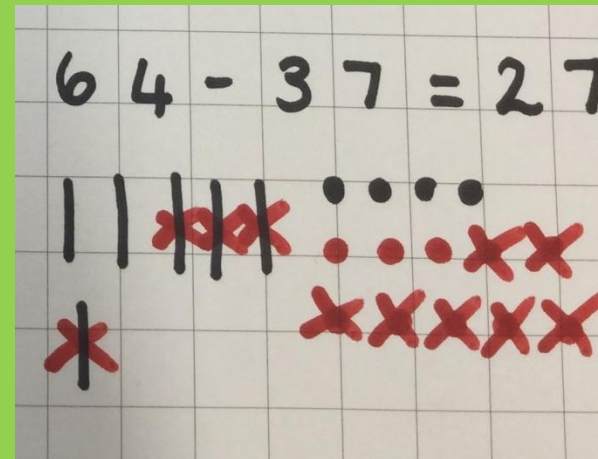
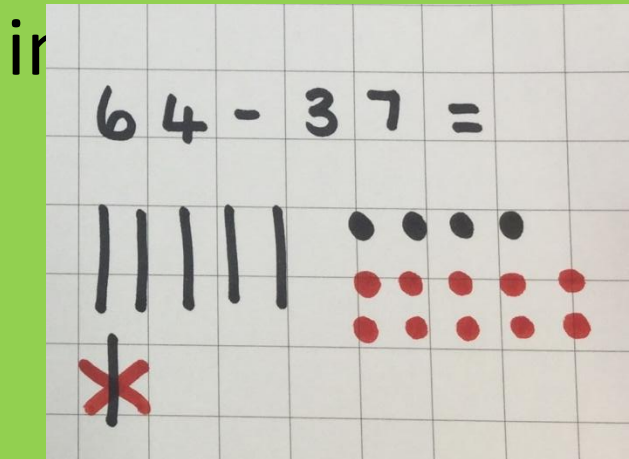
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- We can't cross out 7 ones as we have only drawn 4.

Subtraction to 100.

- It becomes a little more complicated when we are subtracting more ones than we have



- So we exchange one of the ten sticks for 10 dots.
- Now we can solve the subtraction sum.

Subtraction to 100.

- Now they have a simple strategy to solve any subtraction sum!
- Please use this approach at home when you are helping them. 😊

Multiplication

- We teach children to identify the multiplication symbol so that they are able to read number sentences like...

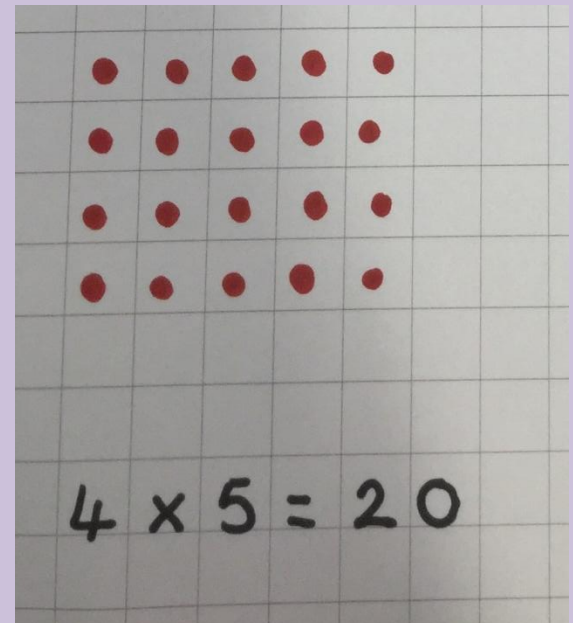
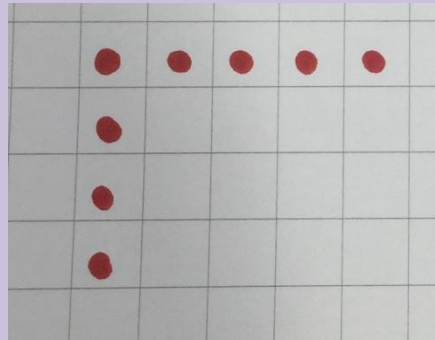
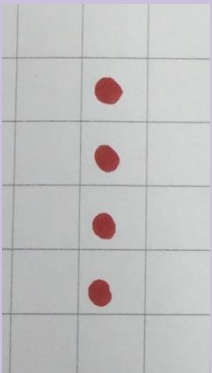
$$4 \times 5 =$$

- They learn that this means “lots of”.

Multiplication

$$4 \times 5 =$$

4 lots of 5 equals



Multiplication

- We are also teaching the children the 2, 3, 5 and 10 times tab

2 times tables	3 times tables	5 times tables	10 times tables
$1 \times 2 = 2$	$1 \times 3 = 3$	$1 \times 5 = 5$	$1 \times 10 = 10$
$2 \times 2 = 4$	$2 \times 3 = 6$	$2 \times 5 = 10$	$2 \times 10 = 20$
$3 \times 2 = 6$	$3 \times 3 = 9$	$3 \times 5 = 15$	$3 \times 10 = 30$
$4 \times 2 = 8$	$4 \times 3 = 12$	$4 \times 5 = 20$	$4 \times 10 = 40$
$5 \times 2 = 10$	$5 \times 3 = 15$	$5 \times 5 = 25$	$5 \times 10 = 50$
$6 \times 2 = 12$	$6 \times 3 = 18$	$6 \times 5 = 30$	$6 \times 10 = 60$
$7 \times 2 = 14$	$7 \times 3 = 21$	$7 \times 5 = 35$	$7 \times 10 = 70$
$8 \times 2 = 16$	$8 \times 3 = 24$	$8 \times 5 = 40$	$8 \times 10 = 80$
$9 \times 2 = 18$	$9 \times 3 = 27$	$9 \times 5 = 45$	$9 \times 10 = 90$
$10 \times 2 = 20$	$10 \times 3 = 30$	$10 \times 5 = 50$	$10 \times 10 = 100$
$11 \times 2 = 22$	$11 \times 3 = 33$	$11 \times 5 = 55$	$11 \times 10 = 110$
$12 \times 2 = 24$	$12 \times 3 = 36$	$12 \times 5 = 60$	$12 \times 10 = 120$

Multiplication

- So if they know these timetables they can solve multiplication sums much quicker...

$$\text{e.g. } 9 \times 5 =$$

- Put up 9 fingers
- Count in steps of 5 for each finger.
- Stop on the 9th finger – you have your answer.

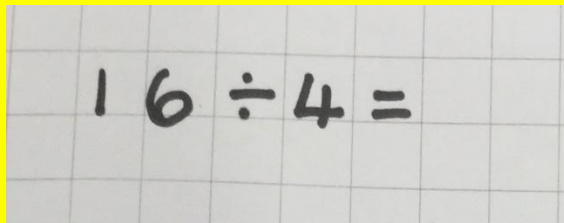
Multiplication.

- Now they have two simple strategies to solve multiplication problems!
- Please use these approaches at home when you are helping them.

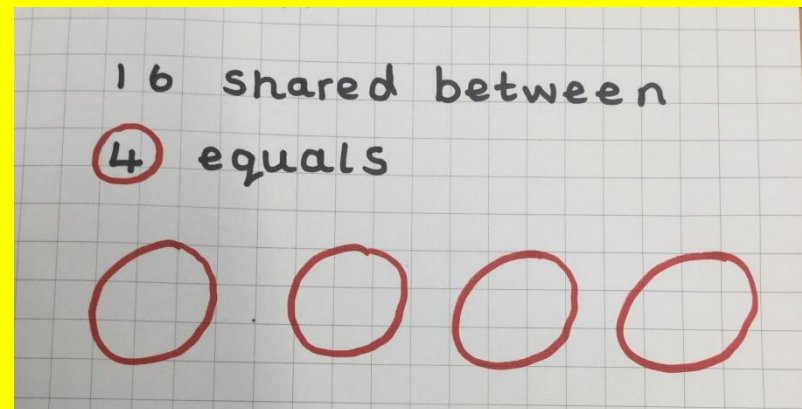


Division

- We have taught the children to recognise the division symbol.



Handwritten on grid paper: $16 \div 4 =$

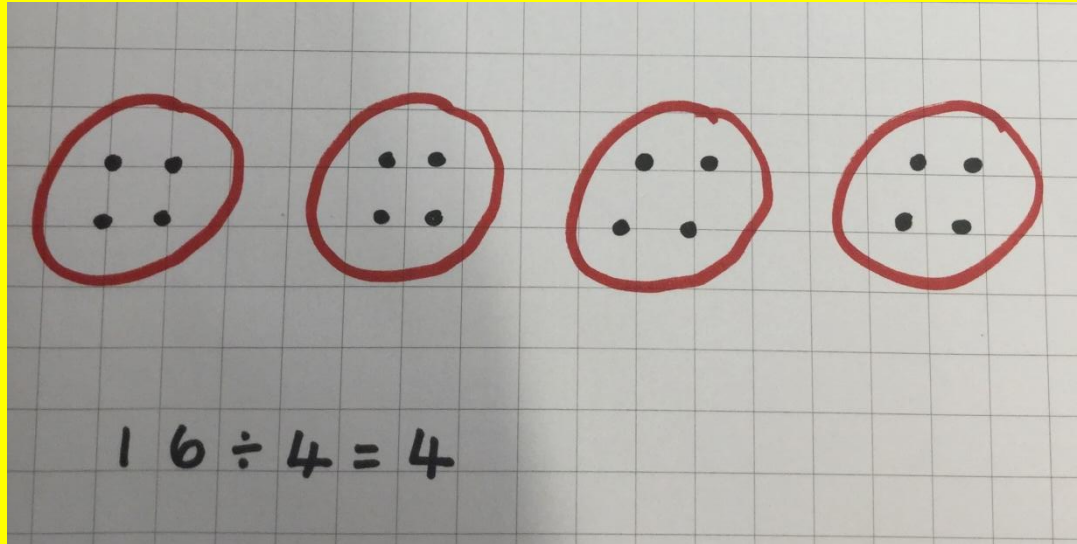


We have taught them that division is the same as saying “____ shared between ____ is ____.”

K.Lewis 2020

So the first number is the whole number and the second number tells us how many groups to share equally into.

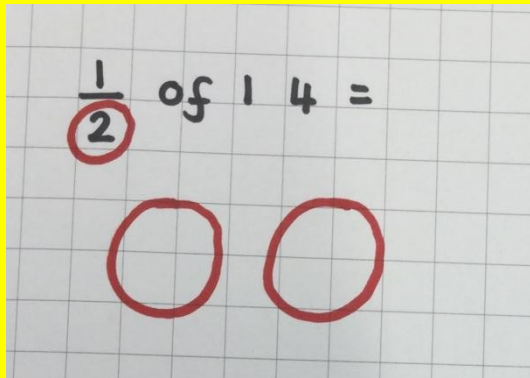
Division



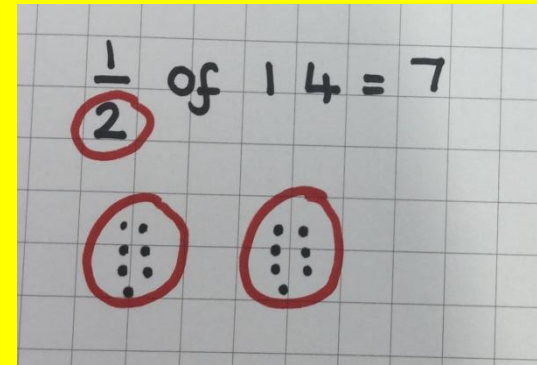
Children draw the groups and then share out the whole number one at a time between the different groups.

Fractions

- We have taught the children a similar approach to working out fractions.



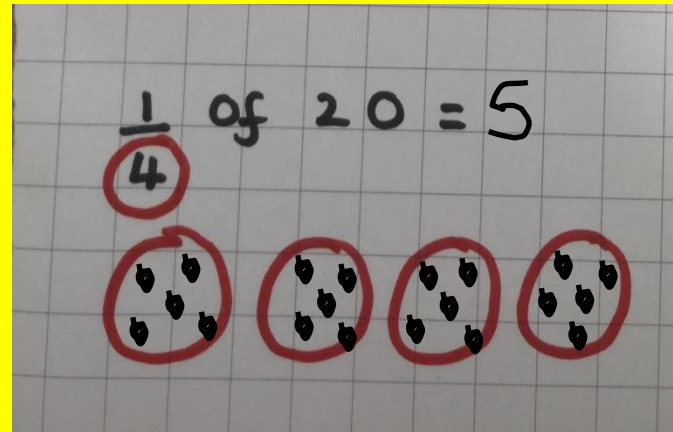
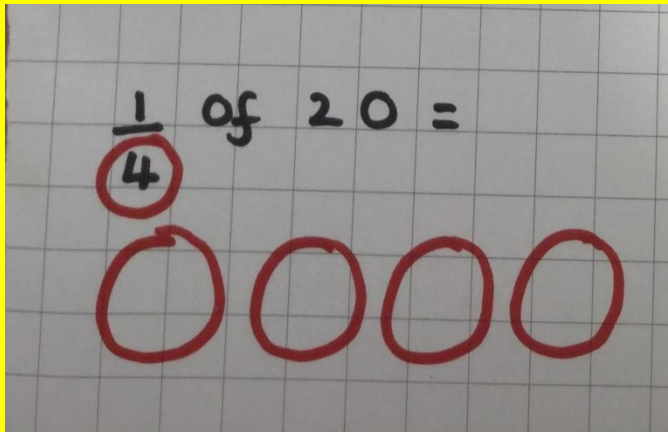
We have taught the children that the digit at the bottom of the fraction tells us how many groups the whole number is being split



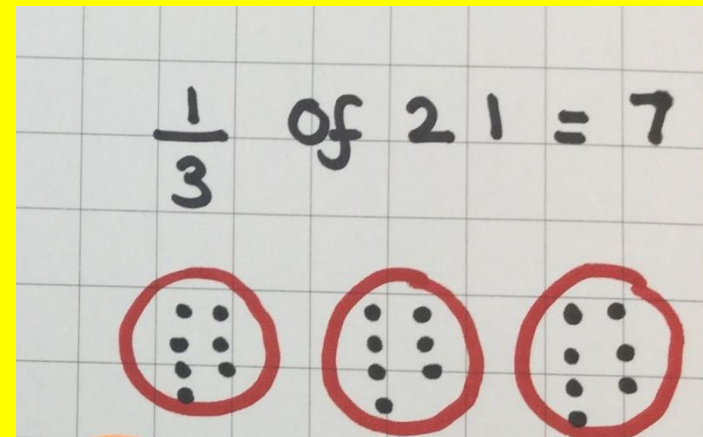
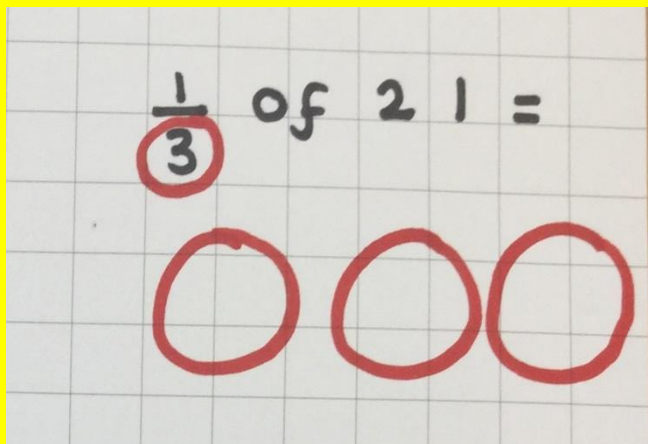
We then share out the whole number equally taking it in turns to give each group a dot one at a time until the whole number has been shared out

Fractions

This is the same for quarters...

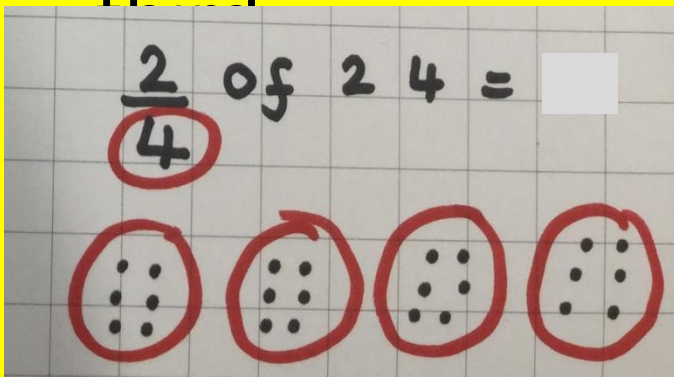


... and for thirds.

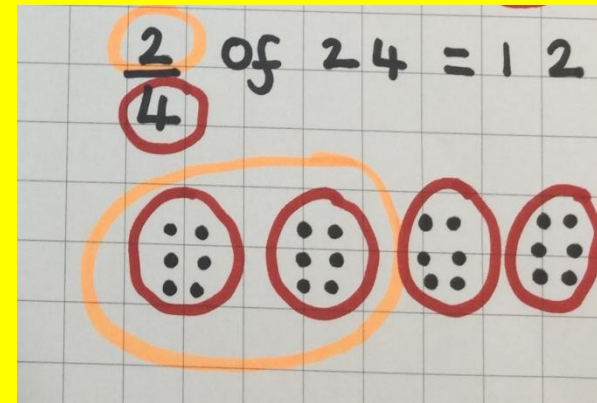


Fractions

- Sometimes fraction questions want the children to find more than one quarter or



If it asks for **2** quarters of an amount, instead of just one, we start off exactly the same.



Once the whole number has been shared out, we look at the digit at the top of the fraction and circle that many of the groups. We then count how many there are in those groups and it will give us the

Today's Workshop

Today we are going to make a snakes and ladders game with an added challenge.

1. First, make the dice and counters using scissors and glue provided.
2. Next, use the colours on your table to colour the squares on the board in a mix of the different colours (blue, green, pink, yellow)
3. After that you need to get some cards (6 blue, 6 green, 6 pink and 6

Addition sums The cards each have a sum on them. E.g.	Subtraction sums on green cards. E.g.	Multiplication sums on pink cards. E.g.	Division or fraction sums on yellow cards. E.g.
$58 + 36 =$	$84 - 43 =$	$4 \times 10 =$	$12 \div 3 =$ Make sure the numbers you choose divide equally.

5. Finally you are ready to play snakes and ladders. When you land on a coloured square, you must pick up a card of that colour and answer the sum on it before playing on.