



Calculation Policy adapted from White Rose Maths Hub Progression in Calculations – supported with a rich use of vocabulary and discussion throughout using 'stem sentences'

Calculation policy: Division

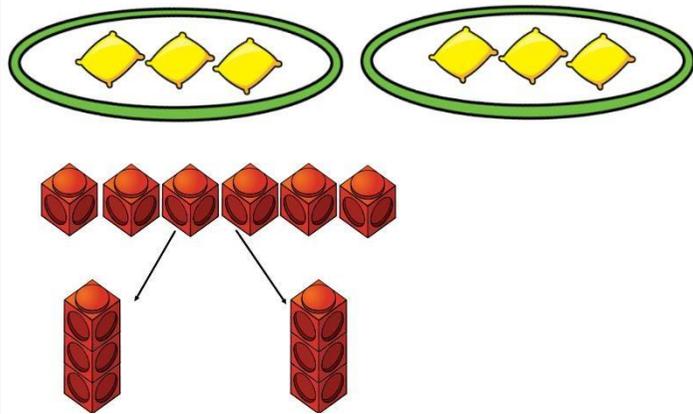
Key language: share, group, divide, divided by, half.

Concrete / build it

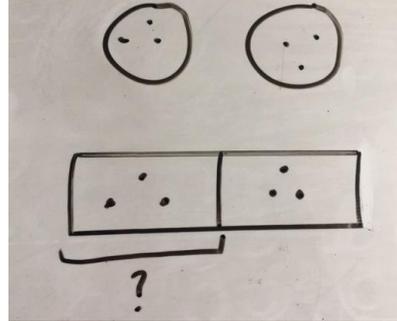
Pictorial/ draw it

Abstract/ write it/
say it

Sharing using a range of objects. $6 \div 2$



Represent the sharing pictorially.



$$6 \div 2 = 3$$

3	3
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Children should also be encouraged to use their 2 times tables facts.

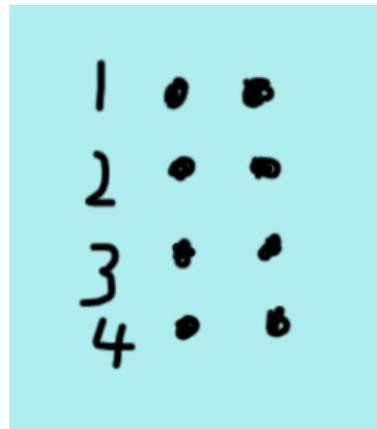
Stem Sentence:

When we make equal groups, each group must have the same amount.

Grouping using a group of counters or objects in rows.
 $8 \div 2$



Represent the grouping in rows called arrays pictorially.
Then count how many rows there are.



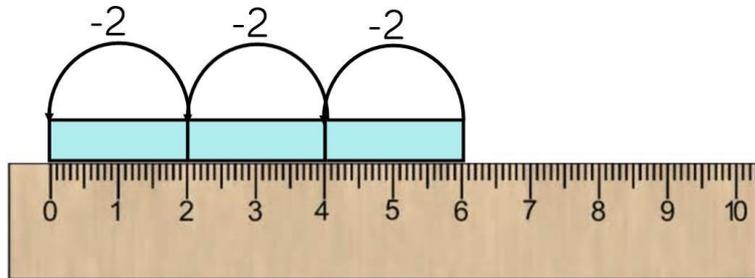
$$8 \div 2 = 4$$

Children should also be encouraged to use their 2 times tables facts.

Stem Sentence:

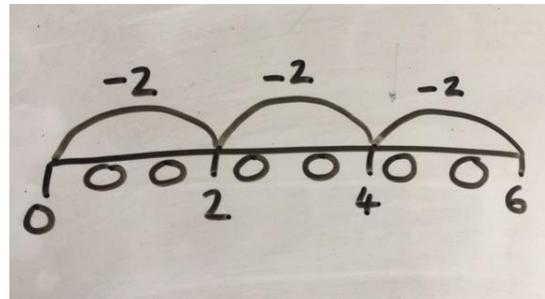
When we divide, we can group equally.

Repeated subtraction using Cuisenaire rods above a ruler. $6 \div 2$

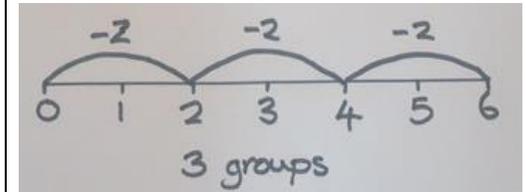


3 groups of 2

Children to represent repeated subtraction pictorially.



Abstract number line to represent the equal groups that have been subtracted.

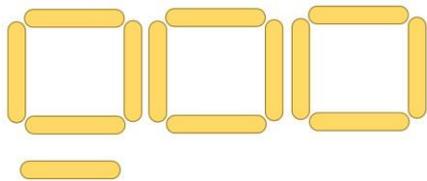


Say it: 6 shared into 3 groups is 3 groups of 2

$2d \div 1d$ with remainders using lollipop sticks. Cuisenaire rods, above a ruler can also be used.

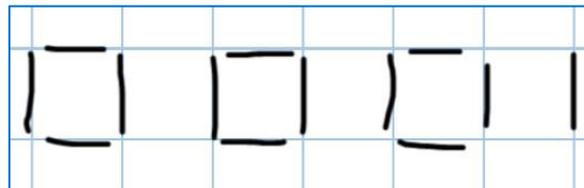
$$13 \div 4$$

Use of lollipop sticks to form wholes- squares are made because we are dividing by 4.



There are 3 whole squares, with 1 left over.

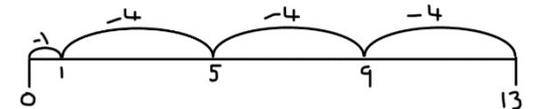
Children to represent the lollipop sticks pictorially.



There are 3 whole squares, with 1 left over.

$$13 \div 4 = 3 \text{ remainder } 1$$

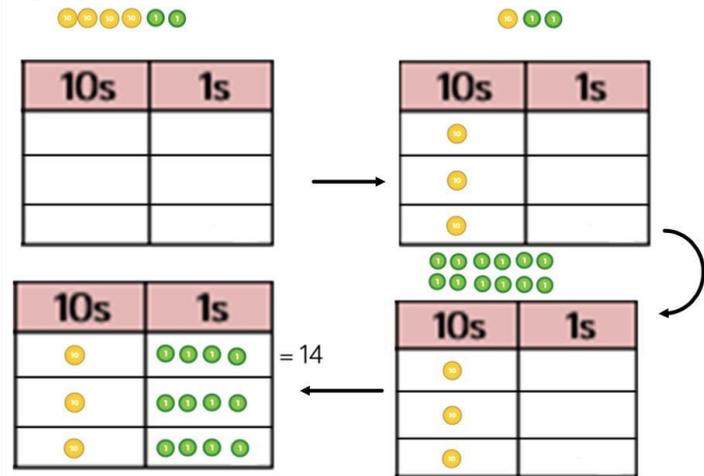
Children should be encouraged to use their times table facts; they could also represent repeated addition on a number line.



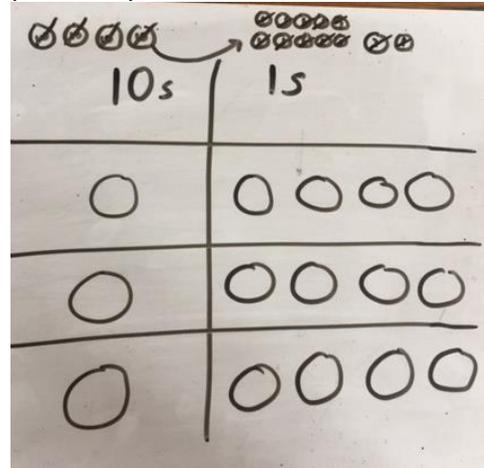
Say it: 3 groups of 4, with 1 left over

Sharing using place value counters.

$$42 \div 3 = 14$$



Children to represent the place value counters pictorially.



Children to be able to make sense of the place value counters and write calculations to show the process.

$$42 \div 3$$

$$42 = 30 + 12$$

$$30 \div 3 = 10$$

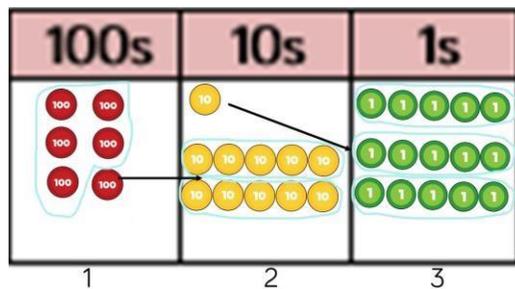
$$12 \div 3 = 4$$

$$10 + 4 = 14$$

Say it: 42 is the whole, 30 is a part, 12 is a part. 30 shared into 3 groups is 10, 12 shared into 3 groups is 4. 42 shared into 3 groups is 14

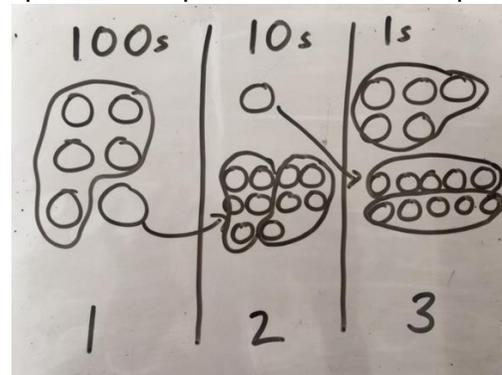
Short division using place value counters to group.

$$615 \div 5$$



1. Make 615 with place value counters.
2. How many groups of 5 hundreds can you make with 6 hundred counters?
3. Exchange 1 hundred for 10 tens.
4. How many groups of 5 tens can you make with 11 ten counters?
5. Exchange 1 ten for 10 ones.
6. How many groups of 5 ones can you make with 15 ones?

Represent the place value counters pictorially.

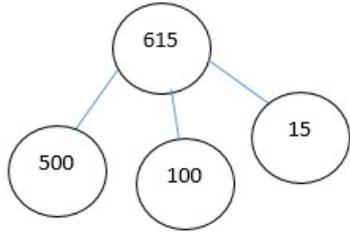


Children to the calculation using the short division scaffold.

$$\begin{array}{r} 123 \\ 5 \overline{) 615} \end{array}$$

Say it: 6 hundreds into groups of 5 is 1 hundred, with 1 hundred left over. 1 hundred and 1 ten grouped into 5 is 20, with 1 ten left over. 1 ten and 5 ones grouped into 5 is 3.

Using the part whole model below, how can you divide 615 by 5 without using short division?



I have £615 and share it equally between 5 bank accounts. How much will be in each account?

615 pupils need to be put into 5 groups. How many will be in each group?

$$5 \overline{)615}$$

$$615 \div 5 =$$

$$\square = 615 \div 5$$

What is the calculation?
What is the answer?

100s	10s	1s