



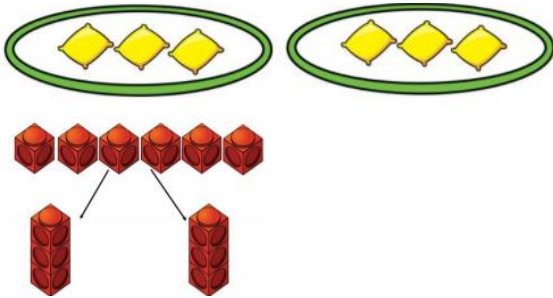
# Division

**Key Vocabulary:** share, group, divide, quotient, divisor, dividend, divided by, half.

### CONCRETE

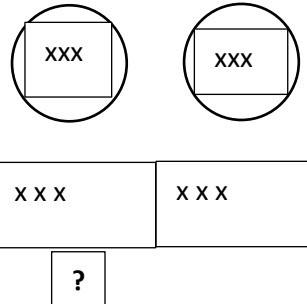
Sharing using a range of objects.

$6 \div 2$



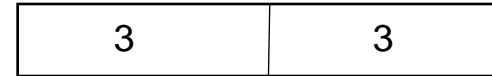
### PICTORIAL

Represent the sharing pictorially.



### ABSTRACT

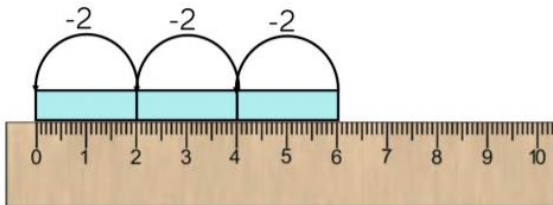
$6 \div 2 = 3$



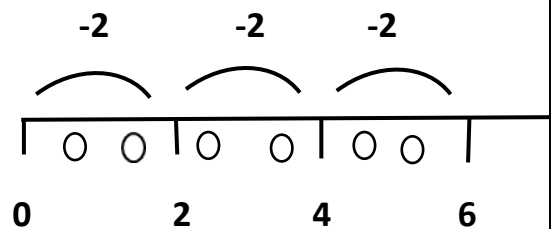
Children should also be encouraged to use their 2 times tables facts.

$6 \div 2$

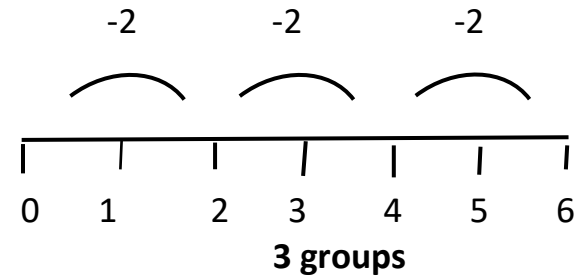
Repeated subtraction using a ruler or a number line. Cuisenaire rods could also be used.



Children to represent repeated subtraction pictorially.



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

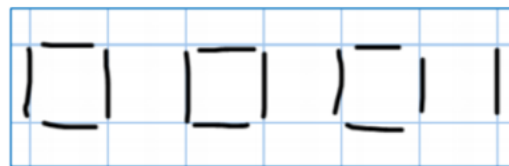


$13 \div 4$  with remainders using lollipop sticks. Cuisenaire rods, above a ruler can also be used. Use of lollipop sticks to form wholes- squares are made because we are dividing by 4.



There are 3 whole squares, with 1 left over

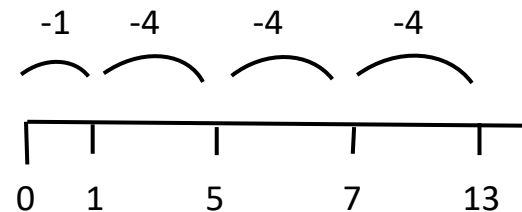
Children to represent the lollipop sticks pictorially.



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

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

'3 groups of 4, with 1 left over'

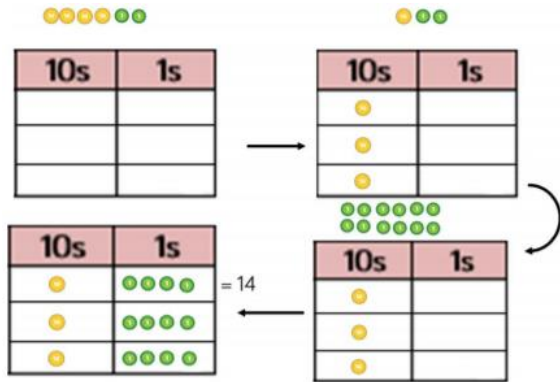




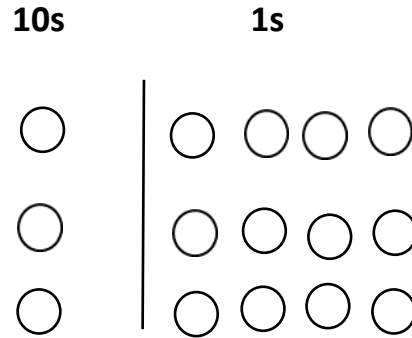
There are 3 whole squares, with 1 left over.

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.

$$42 \div 3$$

$$42 = 30 + 12$$

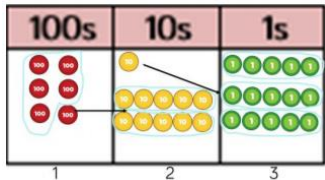
$$30 \div 3 = 10$$

$$12 \div 3 = 4$$

$$10 + 4 = 14$$

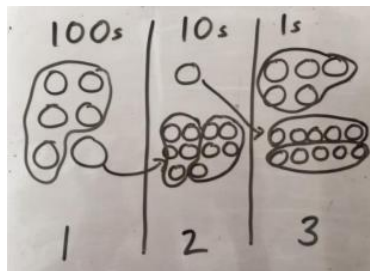
Short division using place value counters to group.

$$615 \div 5$$



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.

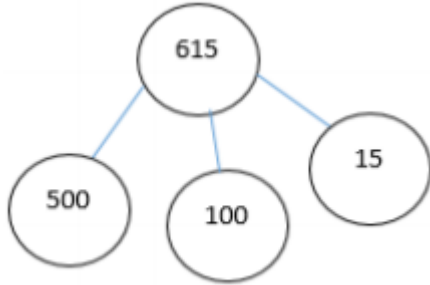
$$5 \overline{) 615} \begin{matrix} 123 \\ \underline{615} \\ 0 \end{matrix}$$





## Conceptual variation; different ways to ask children to solve $615 \div 5$

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?

$$5 \overline{) 615}$$

$$615 \div 5 =$$

$$\square = 615 \div 5$$

