



Vocabulary:

grouping, sharing, splitting, equal groups, dividing, divide, division, remainder, left over, fraction, part, jump, number line

Division: Year 1 and 2

$dividend \div divisor = quotient$

Concrete

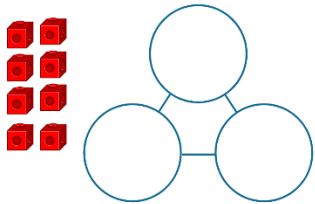
Pictorial

Abstract

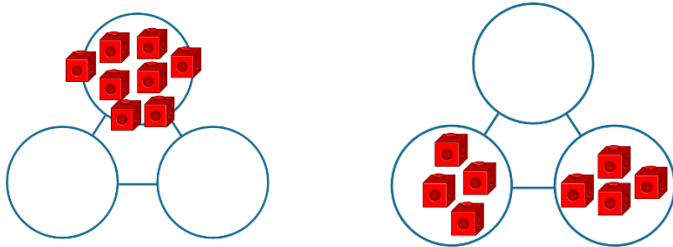
Sharing

I have 8 cubes.

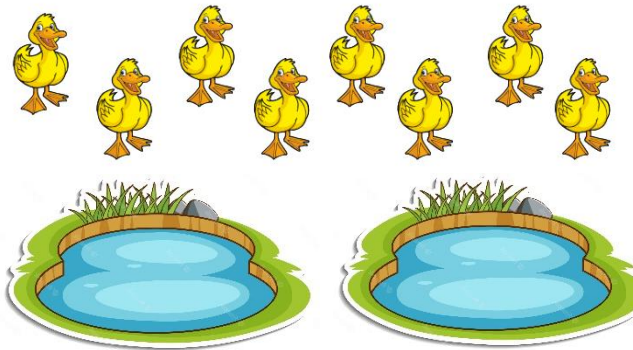
I want to share them equally between the two circles.



I have 4 cubes in each circle. I have shared them equally.



Can you **share** the 8 ducks equally between the two ponds?



“8 divided by 2 equals 4”

$8 \div 2 = 4$

Grouping

I have 8 cubes.

I want to group them into group of 2.

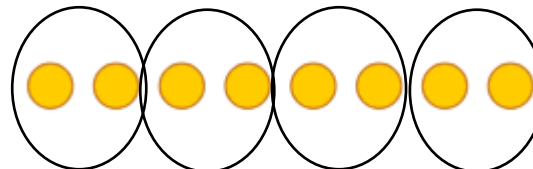
How many groups will I have?



Children to draw or have presented to them an image of 8.

Group them into equal groups of 2.

How many groups?

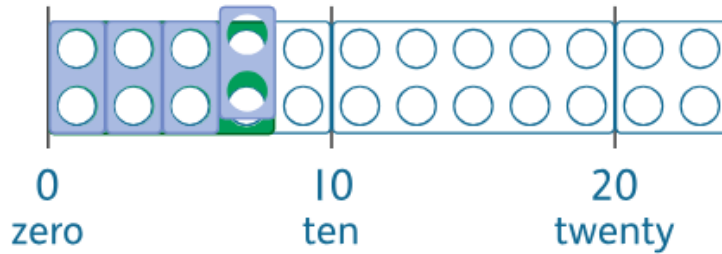
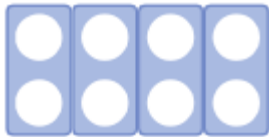


“8 divided by 4 equals 2”

$8 \div 4 = 2$

Use of Numicon shapes

How many groups of 2 fit onto my 8 shape?



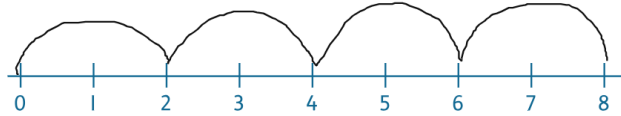
Use of the number line.

Start at 0 and jump in 2s up to 8.

How many equal jumps of 2?

There are 4 equal jumps.

This progresses on from the Numicon shapes.



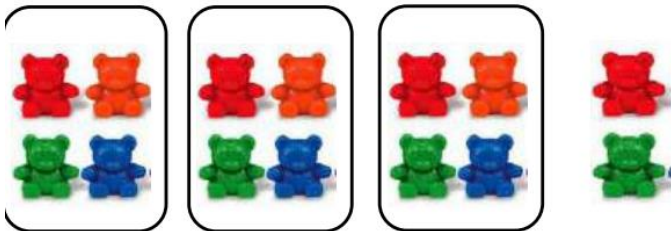
Exploring concept of remainders as "left-over"

I have 14 share bears.

I want to group them equally into groups of 4.

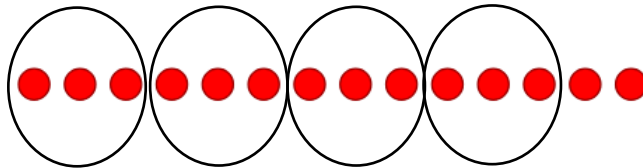
How many groups can I make?

I can make 3 whole groups and there are 2 left over.



How many equal groups of 3 can you make in 14?

I have made 4 groups with 2 left over.



$$14 \div 3 = 4 \text{ with } 2 \text{ left over}$$



Vocabulary:

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Division: Year 3 - 4

$dividend \div divisor = quotient$

Concrete

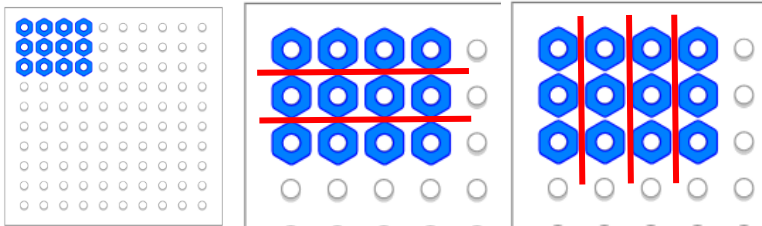
Division using arrays

Children to use Numicon pegs and baseboards create an array.

Look for what division facts they can identify.

E.g. 12 pegs divided into 3 rows of 4 pegs

12 pegs divided into 4 columns of 3 pegs



Pictorial

Array drawn or represented using shapes.



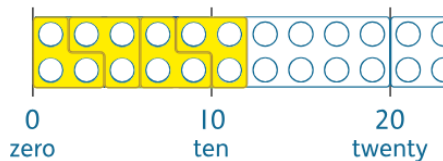
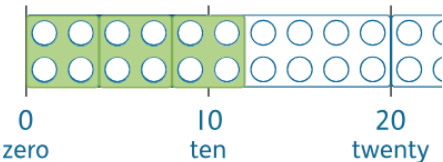
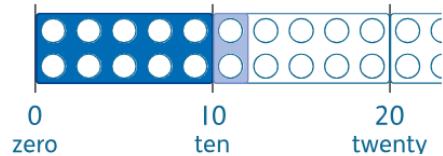
Abstract

I know that:

$12 \div 4 = 3$

$12 \div 3 = 4$

Dividing on a number line

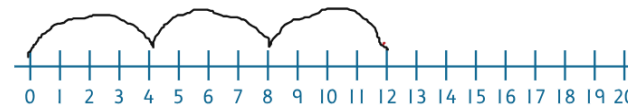


Use of the number line.

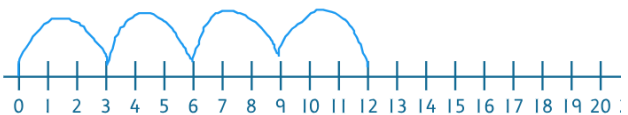
Start at 0 and jump in 4s up to 12.

How many equal jumps of 4?

There are 3 equal jumps

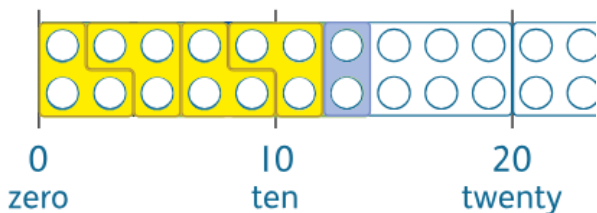
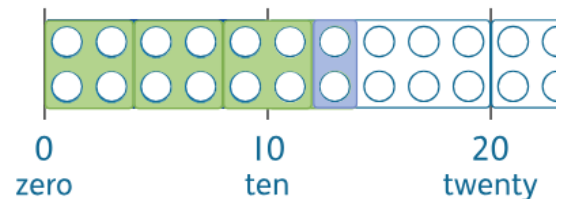
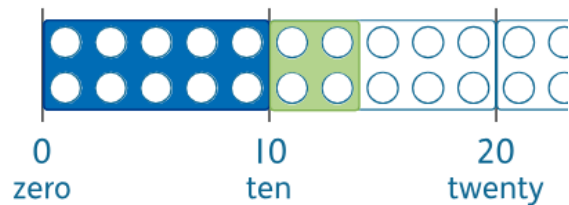


$12 \div 4 = 3$



$12 \div 3 = 4$

Dividing on a number line (with remainders)



Use of the number line.
 Start at 0 and jump in 4s up to 14.
 How many equal jumps of 4?
 There are 3 equal jumps **but** there are 2 left over.



$$14 \div 4 = 3 \text{ r } 2$$

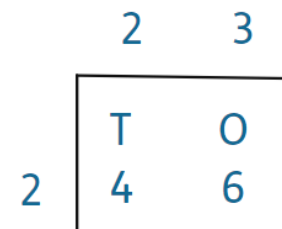
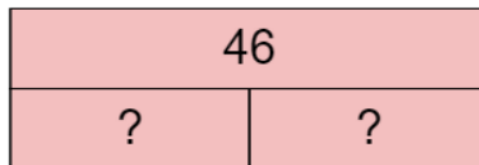


$$14 \div 3 = 4 \text{ r } 2$$

Goes into "Bus stop" method for division



Bar model to represent calculation and to support visualisation. This will support and strengthen the link between division and fractions.





Vocabulary:

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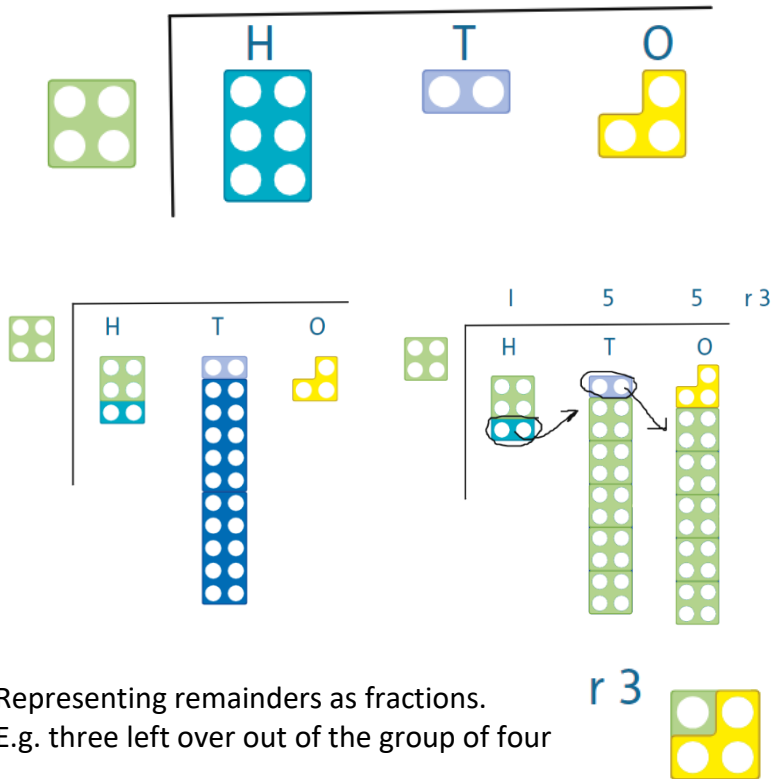
Division: Year 5 - 6

$dividend \div divisor = quotient :$

Concrete

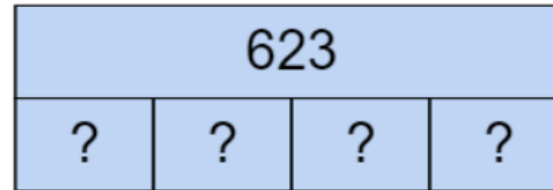
Goes into "Bus stop" method for division

Children exposed to increasingly larger numbers (up to 4 digits and inclusion of decimals in Year 5 and 6).



Pictorial

Bar model to represent calculation and to support visualisation. This will support and strengthen the link between division and fractions.



Abstract



In year 5, children to start to represent the remainder as a fraction.



Year 6

Long division

Children will use long division to divide numbers with up to 4 digits by 2-digit numbers.

$$\begin{array}{r} 015 \\ 32 \overline{) 487} \\ \underline{-0} \\ 48 \\ \underline{-32} \\ 167 \\ \underline{-160} \\ 7 \end{array}$$

$$\begin{array}{r} 17 \text{ r } 19 \\ 31 \overline{) 546} \\ \underline{31} \downarrow \\ 236 \\ \underline{217} \\ 19 \end{array}$$