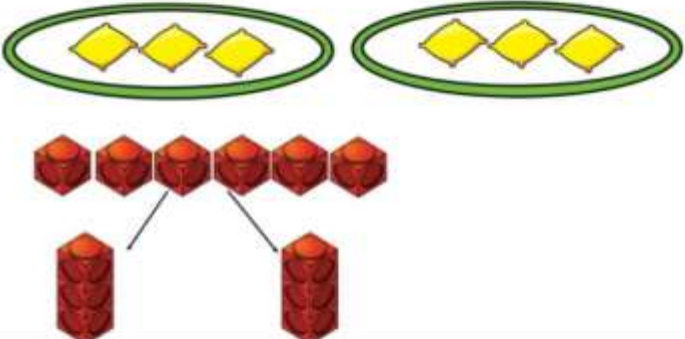
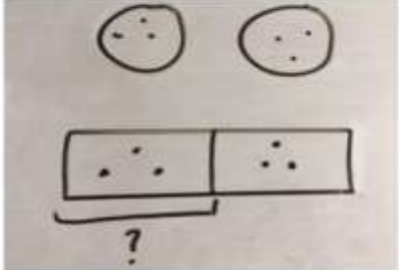
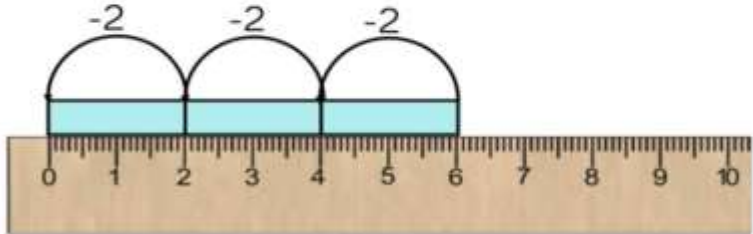
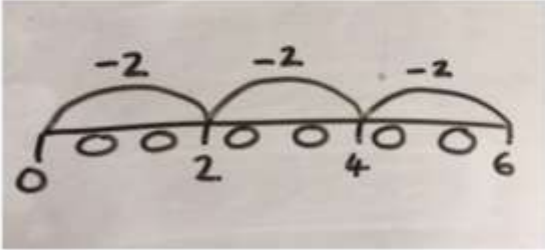
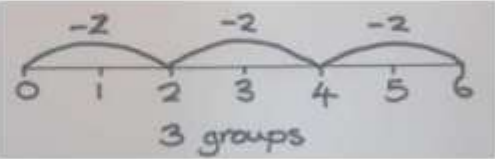


Calculation policy: Division

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

Concrete	Pictorial	Abstract		
<p>Sharing using a range of objects. $6 \div 2$</p>  <p>The diagram shows six yellow diamonds and six red cubes. The diamonds are grouped into two green ovals, each containing three diamonds. The cubes are arranged in a row of six, with two lines extending downwards to two separate vertical columns of two cubes each, representing two groups of two.</p>	<p>Represent the sharing pictorially.</p>  <p>The diagram shows two hand-drawn circles, each containing three dots. Below them is a hand-drawn rectangle divided into two equal halves, each containing three dots. A bracket is drawn under the first half with a question mark below it.</p>	<p>$6 \div 2 = 3$</p> <table border="1" data-bbox="1559 480 2007 539"><tr><td>3</td><td>3</td></tr></table> <p><i>"six shared into two equal groups"</i></p>	3	3
3	3			
<p>Repeated subtraction using Cuisenaire rods above a ruler. $6 \div 2$</p>  <p>The diagram shows a ruler from 0 to 10. Three light blue Cuisenaire rods, each representing the number 2, are placed end-to-end from 0 to 6. Three arcs are drawn above the rods, each labeled '-2', indicating the subtraction of 2 from 6 three times.</p>	<p>Children to represent repeated subtraction pictorially.</p>  <p>The diagram shows a hand-drawn number line from 0 to 6 with circles at each integer. Three arcs are drawn above the line, each labeled '-2', starting at 0, 2, and 4, and ending at 2, 4, and 6 respectively.</p>	<p>Abstract number line to represent the equal groups that have been subtracted.</p>  <p>The diagram shows a number line from 0 to 6 with circles at each integer. Three arcs are drawn above the line, each labeled '-2', starting at 0, 2, and 4, and ending at 2, 4, and 6 respectively. Below the line, the text '3 groups' is written.</p> <p><i>"how many twos go into six?"</i></p>		

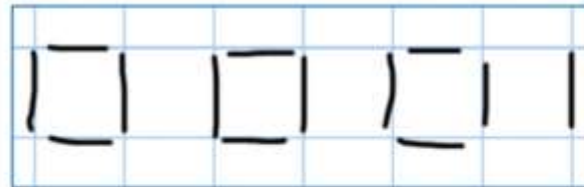
2d + 1d with remainders using lollipop sticks. Cuisenaire rods, above a ruler can also be used. $13 \div 4$

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.

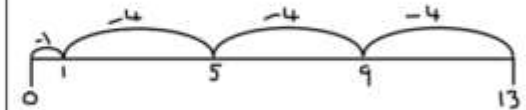


There are 3 whole squares, with 1 left over.

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

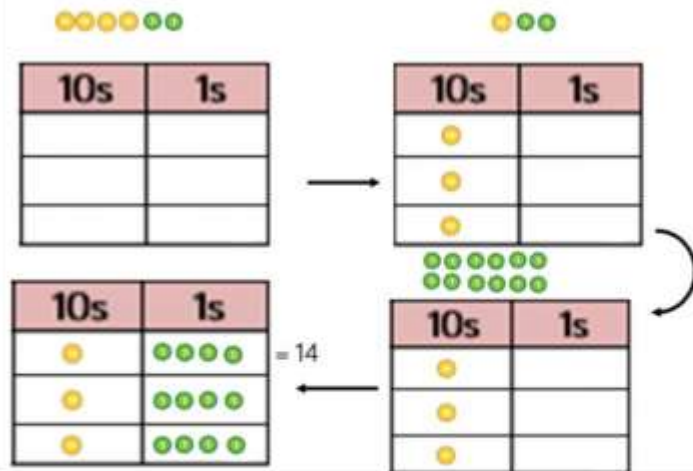
Children should be encouraged to use their times table facts; they could also represent repeated addition on a number line.

'3 groups of 4, with 1 left over'

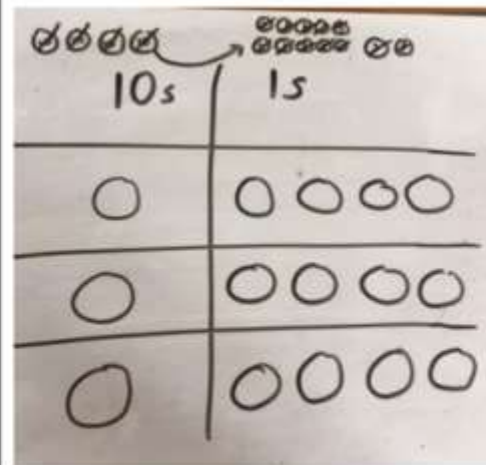


Sharing using place value counters.

$$42 \div 3 = 14$$



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.

$$42 \div 3$$

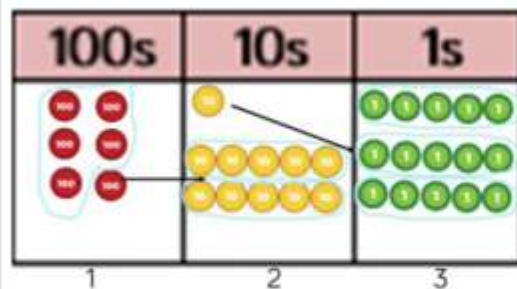
$$42 = 30 + 12$$

$$30 \div 3 = 10$$

$$12 \div 3 = 4$$

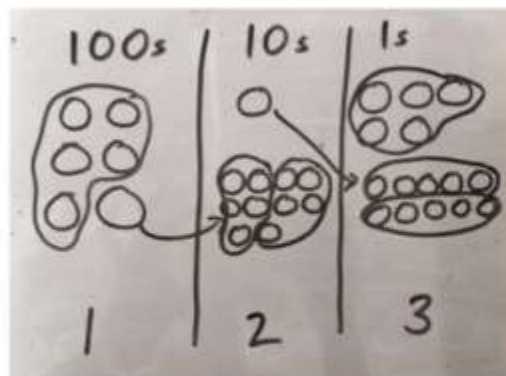
$$10 + 4 = 14$$

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.

$$\begin{array}{r}
 123 \\
 5 \overline{) 615} \\
 \underline{5 } \\
 11 \\
 \underline{10 } \\
 15 \\
 \underline{15} \\
 0
 \end{array}$$

- How many 5s go into 6?
 1 with a remainder of 1
 How many 5s go into 11?
 2 with a remainder of 1
 How many 5s go into 15?
 3

Short division with remainders.

	1	2	3	r 2
5)	6	1	7

	1	2	3.4	
5)	6	1	7.0

Long division using place value counters
 $2544 \div 12$

1000s	100s	10s	1s
●●	●●●●●● ●	●●●●●●	●●●●●●

We can't group 2 thousands into groups of 12 so will exchange them.

1000s	100s	10s	1s
	●●●●●● ●●●●●● ●●●●●● ●●●●●●	●●●●●●	●●●●●●

We can group 24 hundreds into groups of 12 which leaves with 1 hundred.

1000s	100s	10s	1s
	●●●●●● ●●●●●● ●●●●●●	●●●●●● ●●●●●●	●●●●●●

After exchanging the hundred, we have 14 tens. We can group 12 tens into a group of 12, which leaves 2 tens.

1000s	100s	10s	1s
	●●●●●● ●●●●●● ●●●●●●	●●●●●●	●●●●●● ●●●●●● ●●●●●●

After exchanging the 2 tens, we have 24 ones. We can group 24 ones into 2 groups of 12, which leaves no remainder.

		0	2	1	2		
1	2)	2	5	4	4	
			-	2	4		
				1	4		
				-	1	2	
					2	4	
					-	2	4
						0	