

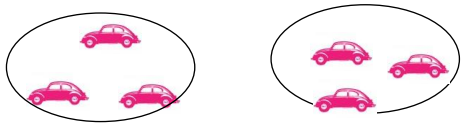
Year 1

Make connections between arrays, number patterns and counting in 2s, 5s and 10s, include solving division problems with support (by using concrete objects, pictorial representations and arrays)

Concrete

Halving

Half of 6 = 3



Sharing

Share objects into groups, how many muffins would be on each plate?



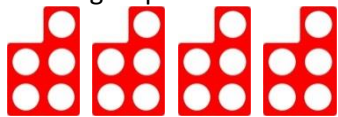
10 shared between 5 is 2



Grouping

Numicon

20 is 4 groups of 5.



Dice

12 is 6 groups of 2

Pictorial

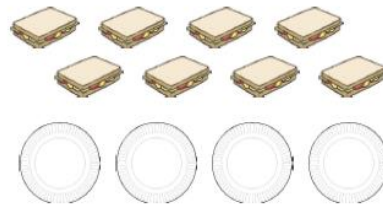
Halving

Half of 6 is 3



Sharing

Share the sandwiches between the 4 plates, draw sandwiches on the plates.



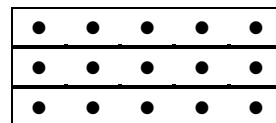
Groups of

6 divided into groups of 2 is 3



Array

15 in groups of 5 is 3 groups



Abstract

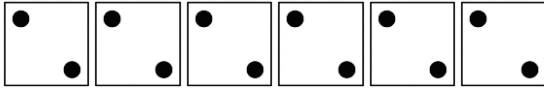
$\frac{1}{2}$ of 6 =

How many groups of 2 can you make from 10?

You have 15 counters and put them into 3 groups. How many counters are in each group?

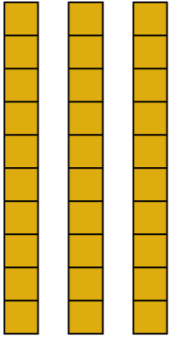
There are 4 children and 12 marbles. How many marbles does each child get?

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Base 10

How many groups of 10 can I make with 30?



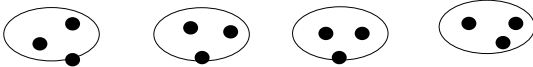
Money

How many 2ps make 8p?



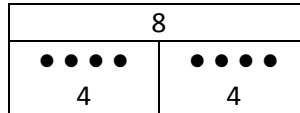
There are 12 sweets and 3 children. How many sweets can they have each?

Use counters and draw round 3 counters at a time.



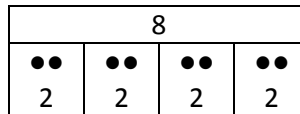
Bar model - Sharing

2 children share 8 sweets, how many do they each receive?



BAR Model – Grouping

How many groups of 2 can you make with 8 counters?



Year 2

Calculate mathematical statement for division within the multiplication tables and write them using the division (\div) and equals (=) signs

Teach the division sign alongside the concrete, pictorial and abstract representations detailed below

Know division facts linked to 2, 5 and 10 multiplication tables, write and solve \div problems within 2, 5, 10 multiplication tables

Concrete

Sharing

15 beanbags shared between 5 hoops:

$15 \div 5 = 3$



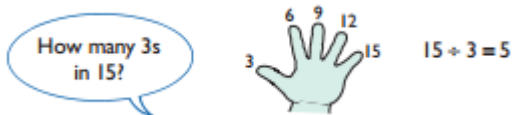
Grouping

2 stars can fit in a box. How many boxes can you fill with 8 stars?

$8 \div 2 = 4$

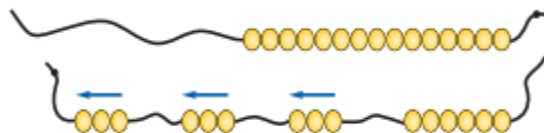


Grouping using fingers



Grouping using a bead string

$15 \div 3 = 5$



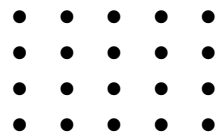
Pictorial

$6 \div 2 = 3$

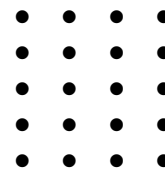


Arrays

$20 \div 5 = 4$

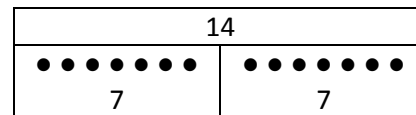


$20 \div 4 = 5$



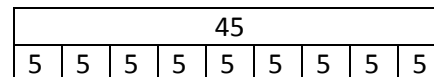
Bar Model - Sharing

$14 \div 2 = 7$



Bar Model – Grouping

$45 \div 5 = 9$



Start with putting jotting and numbers into each bar, move to numbers

Abstract

$6 \div 2 = 3$

$14 \div \square = 7$

$\square \div 10 = 6$

$15 \div \square = 3$

Sharing

I have 18p and divide it between 2 friends, how much will they get each?

Grouping

Pencils come in packs of 30. 5 pencils belong in each pot. How many pots can you fill?

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Grouping with coins

How many 10p coins do you need to make 50p?

$$50 \div 10 = 5$$



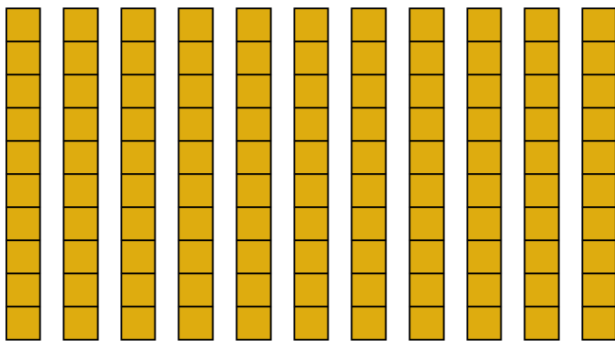
Link counting in 20s to counting in 2s. How many 20 coins make 80p?



Grouping with base 10

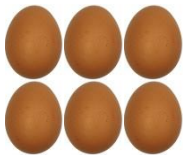
How many 10s do you need to make 110?

$$110 \div 10 = 11$$



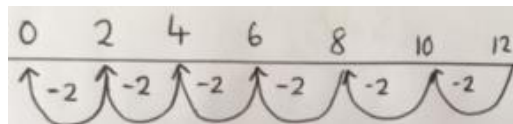
Array

$6 \div 3 = 2$ so $6 \div 2 = 3$

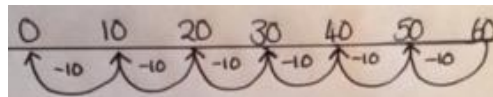


Number line - Grouping

$$12 \div 2 = 6$$



$$60 \div 10 = 6$$



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Recognise odd and even numbers

Concrete

Link odd and even numbers to multiples of 2.

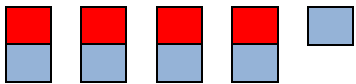
Numicon



Which are odd? Use numicon to explain why.

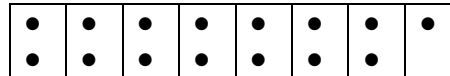
Multilink

Is 9 an odd or even number? Why?



Pictorial

15 is an odd number, prove it.



Abstract

15 is an odd number, prove it.

28 is an odd number, true or false? Why?

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Year 3

Know and use 2,3,4,5, 8 and 10 division tables

Concrete

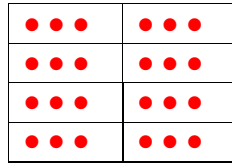
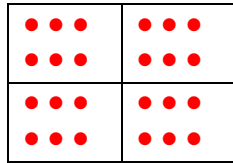
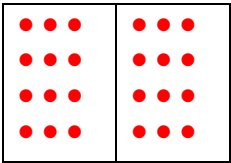
Counters or multilink

Use halving to connect 8, 4, 2 division tables:

$24 \div 2 = 12$

$24 \div 4 = 6$

$24 \div 8 = 3$



Pictorial

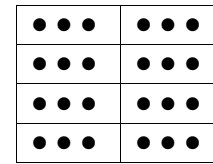
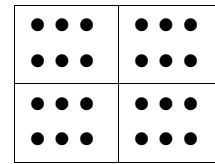
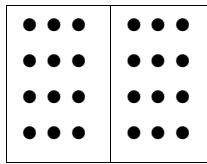
Draw jottings

Use halving to connect 8, 4, 2 division tables:

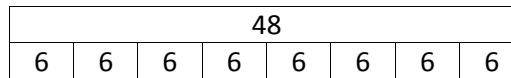
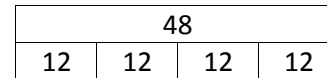
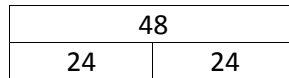
$24 \div 2 = 12$

$24 \div 4 = 6$

$24 \div 8 = 3$



Bar Model



Abstract

If $16 \div 2 = 8$ then $8 \div 4 = \square$

If $32 \div 4 = 6$ then $32 \div 8 = \square$.

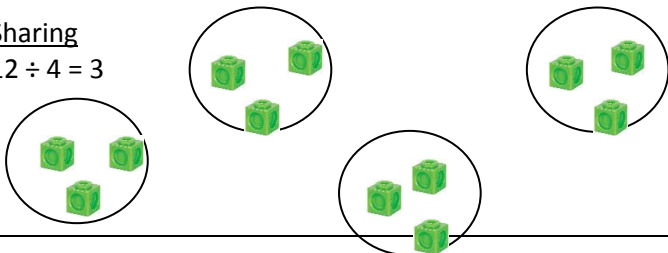
What could $32 \div 16 = \square$

Write and calculate division statements using mental and efficient written methods

Concrete

Sharing

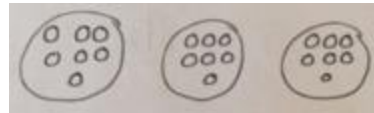
$12 \div 4 = 3$



Pictorial

Sharing

$21 \div 3 = 7$




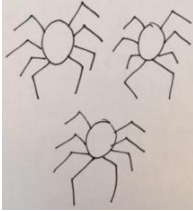
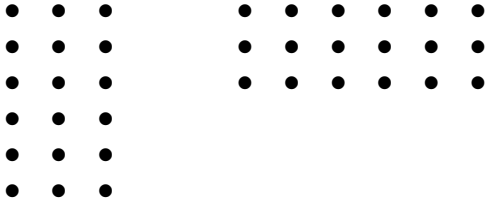
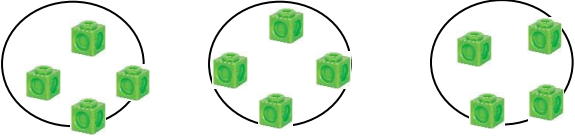

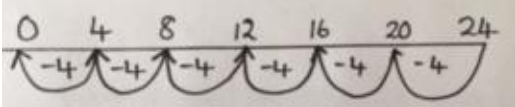
Abstract

$28 \div 4 = \square$

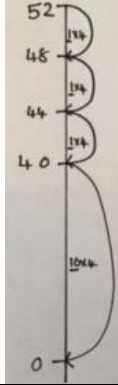
$64 \div \square = 8$

$\square \div 8 = 56$

Peover Superior Primary School – Division Policy

<p>(The divisor is the number of groups)</p> <p><u>Grouping</u></p> <p>$15 \div 3 = 5$</p>  <p>(The divisor is the number in each group)</p> <p>https://www.topmarks.co.uk/Flash.aspx?f=grouping</p>	<p><u>Grouping</u></p> <p>How many spiders have 24 legs in total?</p>  <p>$24 \div 8 = 3$</p> <p><u>Array</u></p> <p>$18 \div 3 = 6$</p> 	<p>Sarah thinks 44 flowers can be shared between 4 vases. Is she correct?</p>								
<p><u>Grouping by repeated subtraction</u></p> <p>$12 \div 4 = 3$</p>  <p>(The divisor is the number in each group)</p> <p>Arrays</p> <p>$40 \div 8 = 5$</p> 	<p><u>Grouping by repeated subtraction</u></p> <p>$24 \div 4 = 6$</p> <p>How many 4s in 24?</p> <table border="1"> <tr> <td colspan="4">24</td> </tr> <tr> <td>6</td> <td>6</td> <td>6</td> <td>6</td> </tr> </table>  <p>Progress to representing vertically, encourage the children to apply known multiplication facts, e.g. $10 \times 4 = 40$.</p>	24				6	6	6	6	<p><u>Grouping by repeated subtraction</u></p> <p>$24 \div 4 = \square$</p> <p>How many 4s in 24?</p> <p>$96 \div 8 = \square$</p> <p>How many 3s in 27?</p> <p>Tom needs to cook 18 cookies. He can cook 3 on each tray. How many trays will he need?</p>
24										
6	6	6	6							

Peover Superior Primary School – Division Policy



$$52 \div 4 =$$

Division by partitioning

Place value counters

$$84 \div 2 = 42$$



Base 10

$$39 \div 3 = 13$$

Share the 10s:

Share the ones:



Place value counters

$$63 \div 3 = 21$$

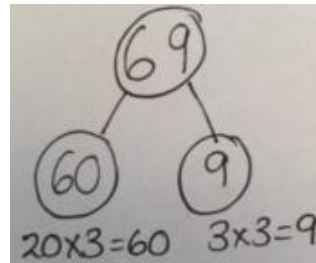
Division by partitioning

$$48 \div 4 = 12$$

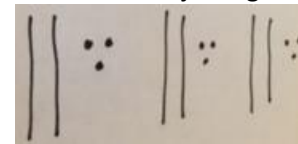
10s	1s
0	00
0	00
0	00
0	00

$$69 \div 3 = 23$$

Part whole



Base 10 jotting



Division by partitioning

$$36 \div 3 = \square$$

$$88 \div 8 = \square$$

$$84 \div \square = 21$$

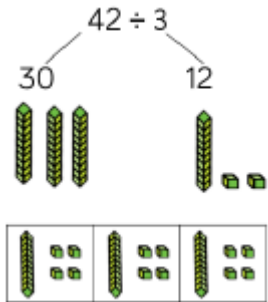
$$105 \div 5 = \square$$

Peover Superior Primary School – Division Policy

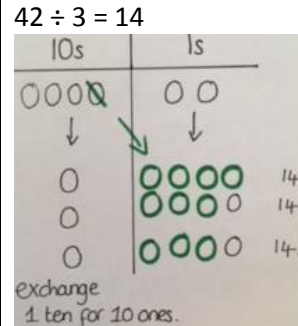
T	O			
● ●	●			
● ●	●			
● ●	●			

Peover Superior Primary School – Division Policy

Divide a 2-digit number by a 1-digit number with exchange



Divide a 2-digit number by a 1-digit number with exchange



Divide a 2-digit number by a 1-digit number with exchange

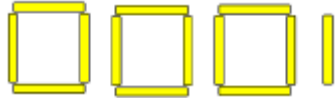
$$42 \div 3 = \square$$

$$56 \div 4 = \square$$

$$64 \div \square = 16$$

Divide a 2-digit number by a 1-digit number, with remainders

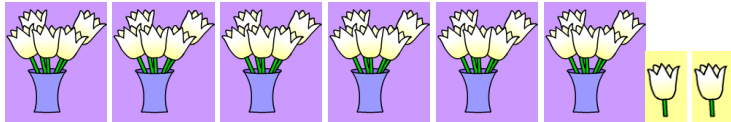
$$13 \div 4 = 3 \text{ r } 1$$



Mum has 32 flowers, she fills each vase with 5 flowers. How many vases did she fill? 6

How many will be left? 2

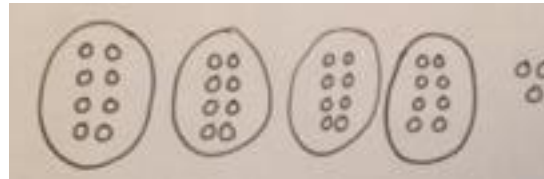
$$32 \div 5 = 6 \text{ r } 2$$



<https://www.topmarks.co.uk/Flash.aspx?f=grouping>

Divide a 2-digit number by a 1-digit number, with remainders

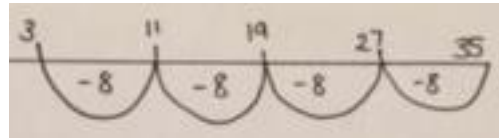
$$35 \div 8 = 4 \text{ r } 3$$



4 groups of 8, 3 remaining.

Number line

$$35 \div 8 = 4 \text{ r } 3$$



Divide a 2-digit number by a 1-digit number, with remainders

$$35 \div 8 = 4 \text{ r } \square$$

$$35 \div 8 = \square \text{ r } 3$$

$$31 \div 4 = \square \text{ r } \square$$

Which numbers can be divided into groups of 5 with a remainder of 3?

$$\square \div 5 = \square \text{ r } 3$$

James has 17 balls. He sorts his balls into equal groups but always has some remaining. How many balls could be in each group and how many could be remaining?

Year 4

Recall division facts for multiplication tables up to 12×12

Concrete

$18 \div 6 = 3$

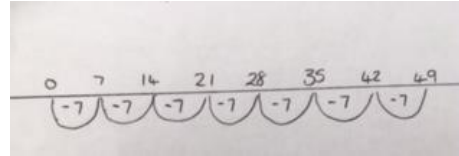


$48 \div 12 = 4$

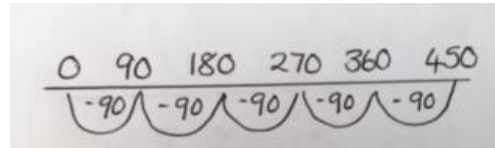


Pictorial

$49 \div 7 = 7$



$450 \div 90 = 5$



Abstract

$72 \div 9 = \square$

$56 \div \square = 7$

$600 \div 3 = 200$ can be derived from $2 \times 3 = 6$

$240 \div 8 = \square$ can be derived from $8 \times \square = 24$

Use halving to connect, 3, 6, 12 division facts

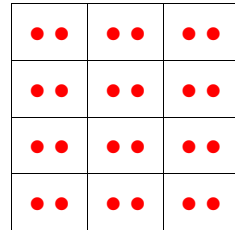
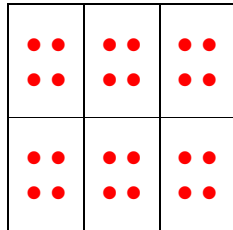
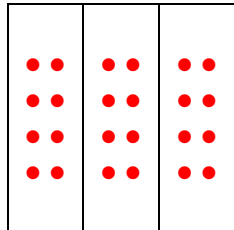
Counters or multilink

Use halving to connect 8, 4, 2 division tables:

$24 \div 3 = 8$

$24 \div 6 = 4$

$24 \div 12 = 2$



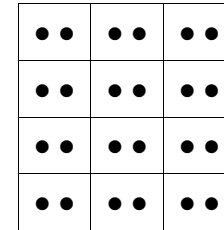
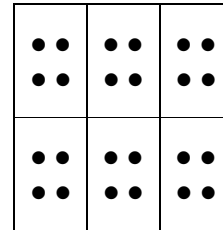
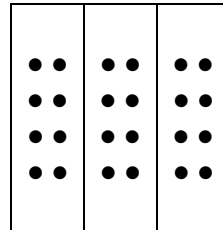
Draw jottings

Use halving to connect 8, 4, 2 division tables:

$24 \div 3 = 8$

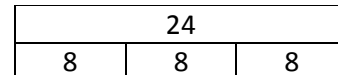
$24 \div 6 = 4$

$24 \div 12 = 2$

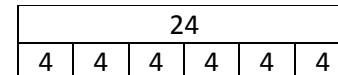


Bar Model

$24 \div 3 = 8$



$24 \div 6 = 4$



If $16 \div 2 = 8$ then $8 \div 4 =$

If $48 \div 6 = 8$ then $48 \div 12 = \square$

What could $48 \div 24 = \square$

Peover Superior Primary School – Division Policy

Divide by 1, 10, 100

Concrete

4 counters shared between 4 hands = 1 each



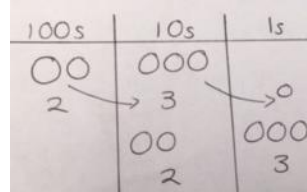
$230 \div 10 = 23$ (Move 1 space to the right)

100s	10s	1s
● ●	● ● ●	
2	3	0
	● ● ●	● ● ●
	2	3

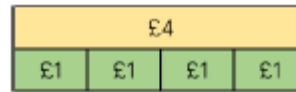
Use place
value
counters or

Pictorial

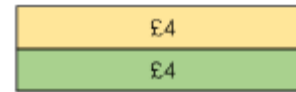
$230 \div 10 = 23$ (Move 1 space to the right)



$£4 \div 1 = 4$



$£4 \div 4 = 1$



Abstract

$240 \div 10 = \square$

$150 \div \square = 15$

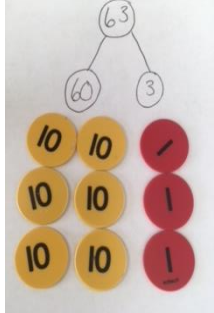
Mary has a money box filled with £1 coins and she has 10 friends. How much money would they have each if the box had £24. If each person had 70p, how much would be in the box?

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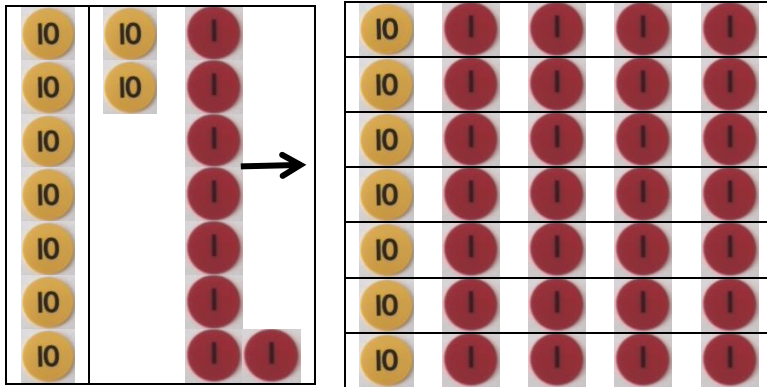
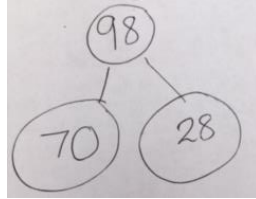
Divide numbers up to 3 digits by a one-digit number using short division with exact answers

Concrete

$$63 \div 3 = 21$$

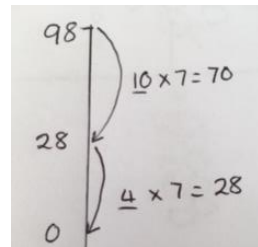
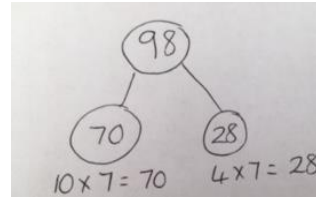


$$98 \div 7 = 14$$



Pictorial

$$98 \div 7 = 14$$



Abstract

$$63 \div 3 = 21$$

$$\begin{array}{r} 21 \\ 3 \overline{) 63} \end{array}$$

98 ÷ 7 becomes

$$\begin{array}{r} 14 \\ 7 \overline{) 98} \end{array}$$

Answer: 14

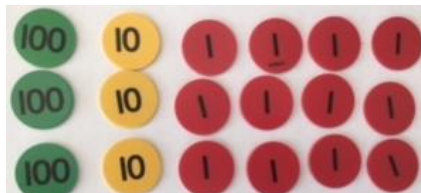
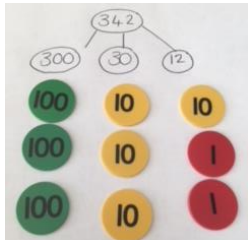
$$54 \div \square = 9$$

$$\square \div 8 = 5$$

$$342 \div 3 = 104$$

$$\begin{array}{r} 114 \\ 3 \overline{) 342} \end{array}$$

$$342 \div 3 = 104$$



Use place
value
counters or

Peover Superior Primary School – Division Policy

Year 5

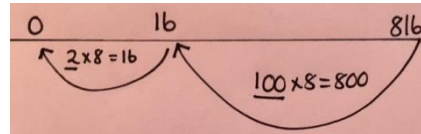
Divide numbers mentally using known facts

Concrete

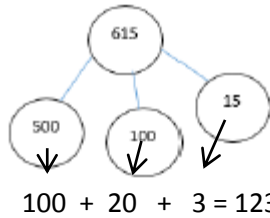
See previous years for examples

Pictorial

Number line
 $816 \div 8 = 102$



$615 \div 5 = 123$



Abstract

$816 \div 8 = 102$
 ($8 \times 100 = 800$, $8 \times 2 = 16$ therefore $100 + 2 = 102$)

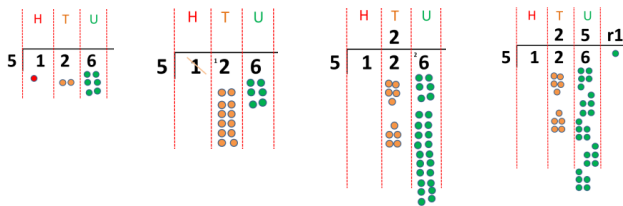
$816 \div \square = 102$

$\square = 615 \div 5$

Divide numbers up to 4 digits by a one-digit number using short division, including those which give remainders

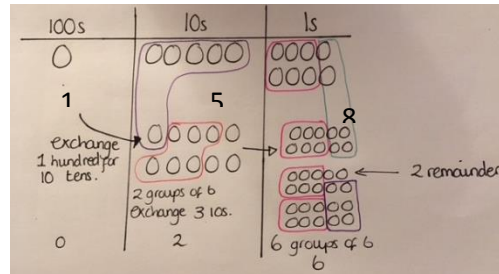
Concrete

Use place value coins to model exchanging
 $126 \div 5 = 25 \text{ r } 1$



Pictorial

$158 \div 6 = 26 \text{ r } 2$



Abstract

$98 \div 7 = 14$

$$\begin{array}{r} 14 \\ 7 \overline{) 98} \\ \underline{7} \\ 28 \\ \underline{28} \\ 0 \end{array}$$

$9648 \div 8 = 1206$

$$\begin{array}{r} 1206 \\ 8 \overline{) 9648} \\ \underline{8} \\ 16 \\ \underline{16} \\ 48 \\ \underline{48} \\ 0 \end{array}$$

What is the missing number?

$158 \div 6 = 26 \text{ r } 2$ or $26 \frac{1}{3}$

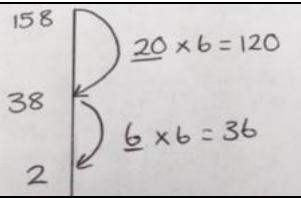
$\square \div 7 = 141$

$$\begin{array}{r} 141 \\ 7 \overline{) 987} \\ \underline{7} \\ 28 \\ \underline{28} \\ 07 \\ \underline{07} \\ 0 \end{array}$$

$$\begin{array}{r} 26 \text{ r } 2 \\ 8 \overline{) 208} \\ \underline{16} \\ 48 \\ \underline{48} \\ 0 \end{array}$$

$$\begin{array}{r} 138 \\ 6 \overline{) 828} \\ \underline{6} \\ 22 \\ \underline{18} \\ 48 \\ \underline{48} \\ 0 \end{array}$$

Peover Superior Primary School – Division Policy

		$7 \overline{) \square 287}$
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Divide whole numbers and those involving decimals by 10, 100 and 1000

Concrete

$$4230 \div 10 = 420.3$$

(Move 1 space to the right)

1000s	100s	10s	1s	• $\frac{1}{10}$ s
●● ●● 4	●●	0	●● ● 3	● 0
	●● ●● 4	●●	0	●● ●● 3

Pictorial

$$3421 \div 100 = 34.21$$

(Move 2 spaces to the right)

1000s	100s	10s	1s	$\frac{1}{10}$ s	$\frac{1}{100}$ s
○○○	○○○○	○○	○	●	
		○○○	○○ ○○	●●	○
		3	4	●	2
				●	1

Abstract

$$6305 \div 10 =$$

$$6305 \div 100 =$$

$$6305 \div 1000 =$$

$$1024 \div \square = 102.4$$

$$\square \div 100 = 26$$

Peover Superior Primary School – Division Policy

Year 6

Divide using all division facts

Concrete

See previous years for examples

Pictorial

See previous years for examples

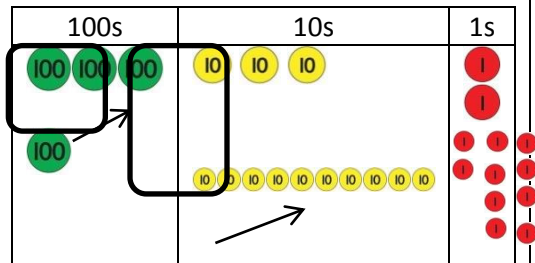
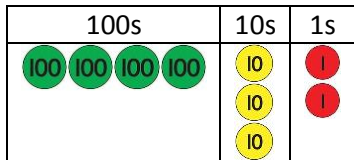
Abstract

See previous years for examples

Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.

Concrete

$$432 \div 15 = 28 \text{ r } 12$$

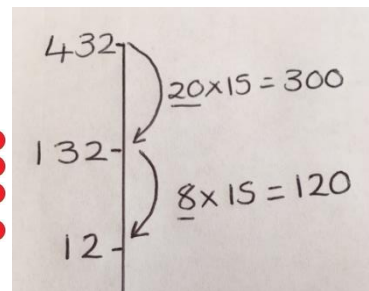
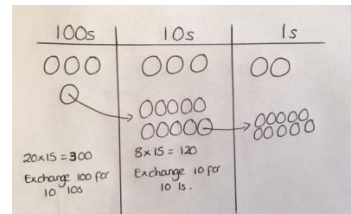


8 lots of 15 = 120. This leaves 10, exchange for 10 1s.

In total there were 20 lots of 15 and 8 lots of 15 with 12 remaining, 28 r 12.

Pictorial

$$432 \div 15 = 28 \text{ r } 12$$



Abstract

$$432 \div 15 =$$

$$\begin{array}{r}
 28 \text{ r } 12 \\
 15 \overline{) 432} \\
 \underline{300} \\
 132 \\
 \underline{120} \\
 12
 \end{array}$$

$$432 \div 15 = 28 \text{ r}$$

$$12$$

$$\begin{array}{r}
 28 \\
 15 \overline{) 432} \\
 \underline{300} \quad 15 \times 20 \\
 132 \\
 \underline{120} \quad 15 \times 8 \\
 12
 \end{array}$$

$\frac{12}{15} = \frac{4}{5}$

$$432 \div 15 = 28 \frac{4}{5}$$

$$\begin{array}{r}
 28.8 \\
 15 \overline{) 432.0} \\
 \underline{300} \quad \downarrow \\
 132 \\
 \underline{120} \quad \downarrow \\
 120 \\
 \underline{120} \quad \downarrow \\
 0
 \end{array}$$

$$432 \div 15 = 28.8$$

Peover Superior Primary School – Division Policy

Divide numbers up to 4 digits by a two-digit number using short division where appropriate, giving remainders as whole numbers, fractions, decimals or by rounding

Concrete

Refer back to previous years for concrete examples

Pictorial

Refer back to previous years for pictorial examples

Abstract

$$496 \div 11 = 45 \text{ r}1 \text{ or } 45 \frac{1}{11}$$

$$\begin{array}{r}
 \overline{) 496} \\
 \underline{44} \\
 56 \\
 \underline{55} \\
 1
 \end{array}$$

$$1512 \div 12 = 126$$

$$\begin{array}{r}
 \overline{) 1512} \\
 \underline{12} \\
 31 \\
 \underline{24} \\
 72 \\
 \underline{72} \\
 0
 \end{array}$$