Calculation Policy

WRITTEN ADDITION METHODS

Year 1

+ = signs and missing numbers

3 + 4 = □ □ = 3 + 4

3 + □ = 7 7 = □ + 4

□ + 4 = 7 7 = 3 + □

□ + ∇ = 7 7 = □ + ∇

Promoting covering up of operations and numbers using pictorial representations.

Bar Model for missing numbers

3 + ___ = 7

7 (biggest number always at the top)	
3	Draw ones to see how many more are needed to make 7

Numbered number lines,

Year 2

+ = signs and missing numbers

Continue using a range of equations as in Year 1 but with appropriate, larger numbers.

Pictorial, Written and mental addition of;

- 2 digit number and a 1 digit number (23 +6)
- 2 digit number and a tens (23 +20)
- 2 two digit numbers (23 + 19)
- Adding 3 one digit numbers (4 + 6 + 9)

Written methods to include;

Partitioning and recombining

20 + 3

10 + 2

30 + 5 = 35

Next step:

Year 3

+ = signs and missing numbers

Continue using a range of equations as in Year 2 but with appropriate, larger numbers.

Written methods to include;

Add numbers with 3 digits, including using column addition

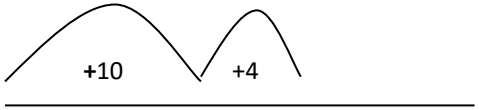
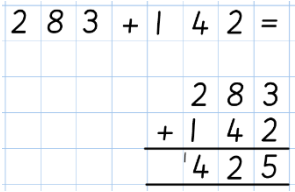
- Add 2 numbers with 3-digits together using column addition without exchange between units and tens

223 + 142

223

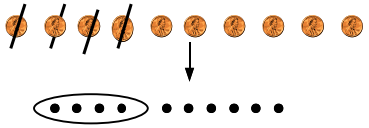
\+ 142

365

Teacher will model the use of number lines and children will then use to help with their own addition calculations. 7 + 4 = 11  **Extend to a blank number line (with 100 square to support adding the 10 if necessary)** 58 + 14  	Add up to 2-digit numbers using written methods including column addition (without carrying) *23 + 42* 23 + 42 65 Use equipment such as base ten to support children's understanding.	- Add 3 numbers with 3-digits using column addition where the units or tens make more than 10  Use equipment such as base ten to support children's understanding.

WRITTEN ADDITION		
Year 4	**Year 5**	**Year 6**
<u>Written methods to include;</u> **Add numbers using formal written methods with up to 4-digits** - Add 2 numbers with 4-digits together using column addition without exchange between units and tens - Add 2 numbers with 4-digits together using column addition, where the units, tens or hundreds when added make more than 10. - Add 3 numbers with 4-digits using column addition where the units, tens or hundreds make more than 10	**<u>Written methods to include;</u>** **Add and subtract whole numbers with up to 5 digits, including using formal written methods** - Add 2 numbers with 5-digits together using column addition without exchange between units and tens - Add 2 numbers with 5-digits together using column addition, where the units, tens or hundreds when added make more than 10. - Add 3 numbers with 5-digits using column addition where the units, tens or hundreds make more than 10	**<u>Written methods to include;</u>** As Year 5 but with larger numbers. Children should also add negative integers on a number line. **<u>Children should be able to choose the most reliable and efficient methods for themselves</u>.**

2983 + 1989 = 2983 + 1989 4972 **Model negative numbers using a number line.** **Model time problems using a number line.**	62983 + 11989 = 62983 + 11989 74972 Add numbers with up to three decimal places 12345 + 9.234 = 12345 + 9.234 21.579 **Model negative numbers using a number line.** **Model time problems using a number line**	

WRITTEN SUBTRACTION		
Year 1	**Year 2**	**Year 3**
Pictures / marks - Visual / practical activities Sam spent 4p. What was his change from 10p?  **- = signs and missing numbers**	**- = signs and missing numbers** Continue using a range of equations as in Level 1 but with appropriate numbers. Extend to 14 + 5 = 20 - □ Find a small difference by counting up Beginning with the 'numbered' number line to subtract from the largest number.	**Find a small difference by counting up** Continue as in Level 2 but with; - 3 digit number subtract a one digit - 3 digit number subtract a ten - 3 digit number subtract another 3 digit As children become more familiar with working with larger numbers and at the teacher's discretion (taking SEN into account) the column method of subtraction will be introduced.

7 - 3 = □ □ = 7 - 3

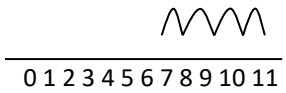
7 - □ = 4 4 = □ - 3

□ - 3 = 4 4 = 7 - □

□ - ∇ = 4 4 = □ - ∇

Number lines numbered;

11 – 4 = 7



Counting back from 11 to 7 (counting on top of the line)

Recording by - drawing jumps on prepared lines

- constructing own lines

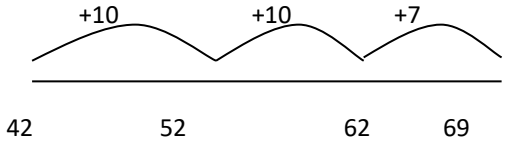
(Teachers model jottings appropriate for larger numbers)

Extend to a blank number line (with 100 square to support subtracting the 10 if necessary)

Written methods to include;

When children are secure with counting back (Year 1), they may move onto subtracting by finding the difference (complementary addition):

69 - 42



Next step:

Subtract up to 2-digit numbers using written methods including column subtraction (without borrowing)

89 - 42

89

- 42

47

Written methods to include;

Subtract numbers with 3 digits, including using column subtraction

- Subtract a 3-digit number from another using column subtraction which requires no exchange between the units, tens or hundreds

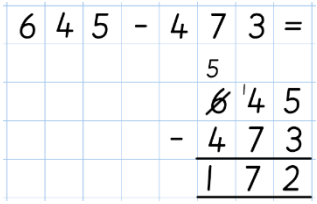
289 - 142

289

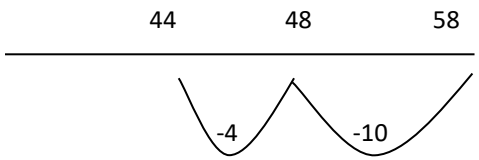
- 142

147

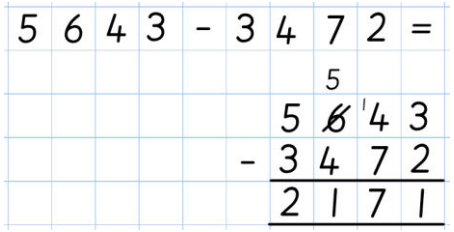
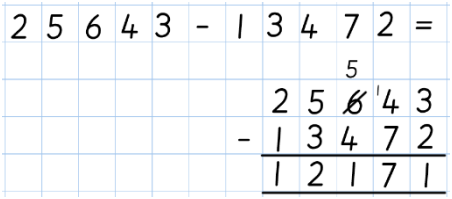
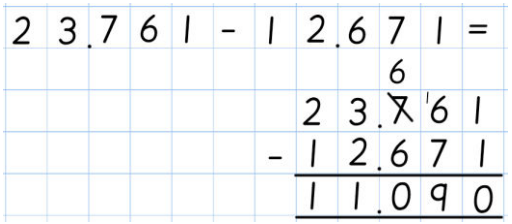
- Subtract a 3-digit number from another using column subtraction which requires exchange between the units, tens or hundreds



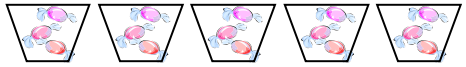
Use equipment such as base ten to support children's understanding.

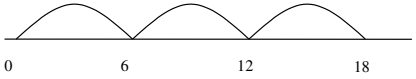
58 - 14  	Use equipment such as base ten to support children's understanding.	

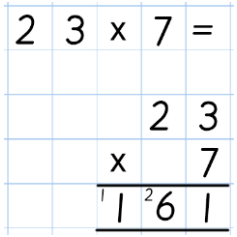
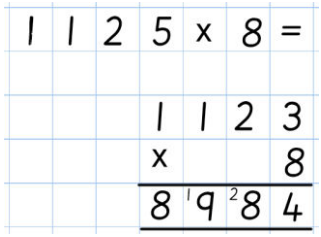
WRITTEN SUBTRACTION		
Year 4	**Year 5**	**Year 6**
<u>Written methods to include;</u> **Add and subtract numbers using formal written methods with up to 4-digits** - Subtract a 4-digit number from another using column subtraction which requires no exchange between the units, tens, hundreds or thousands - Subtract a 4-digit number from another using column subtraction which requires exchange between the	**<u>Written methods to include;</u>** **Add and subtract whole numbers with up to 5 digits, including using formal written methods** - Subtract a 5-digit number from another using column subtraction which requires no exchange between the units, tens, hundreds or thousands	**<u>Written methods to include;</u>** As Year 5 but with larger numbers. Children should also subtract negative integers on a number line.

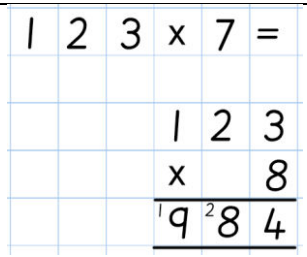
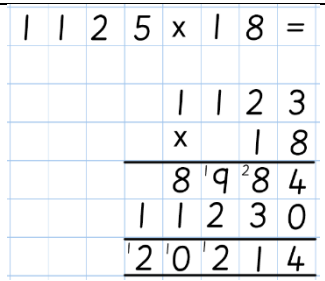
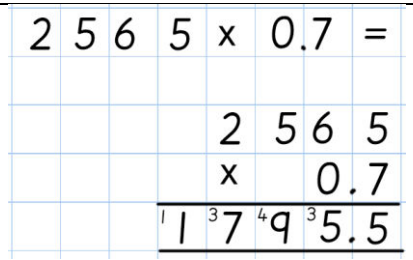
units, tens, hundreds or thousands (or any two of these) - Use borrowing across to work out change from £20.00, £10.00 and £5.00.  **Model negative numbers using a number line.** **Model time problems using a number line.**	- Subtract a 5-digit number from another using column subtraction which requires exchange between the units, tens, hundreds or thousands (or any two of these)  **Subtract numbers with up to three decimal places**  **Model negative numbers using a number line.** **Model time problems using a number line.**	**Children should be able to choose the most reliable and efficient methods for themselves.**

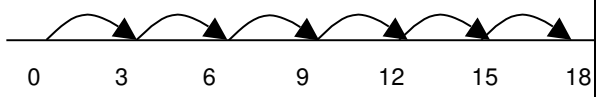
WRITTEN MULTIPLICATION		
Year 1	**Year 2**	**Year 3**

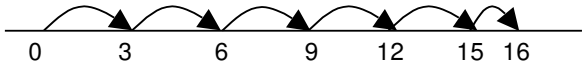
With support and real objects solve multiplication calculations 1. **Pictures and symbols** There are 3 sweets in one bag. How many sweets are there in 5 bags?  *(Recording on a number line modelled by the teacher when solving problems)* **Extension** For those children who can show multiplication calculations with pictures and symbols, introduce arrays as in Year 2.	**x = signs and missing numbers** 7 x 2 = □ □ = 2 x 7 7 x □ = 14 14 = □ x 7 □ x 2 = 14 14 = 2 x □ □ x ∇ = 14 14 = □ x ∇ **Arrays continued and repeated addition** ● ● ● ● 4 x 2 or 4 + 4 ● ● ● ● 2 x 4 or repeated addition 2 + 2 + 2 + 2 **15 x 2 = 30** Partition (10 x 2) + (5 x 2) 20 + 10	**x = signs and missing numbers** Continue using a range of equations as in Year 2 but with appropriate numbers. **Written methods to include;** **Write and calculate using multiplication; 2-digit x one-digit; using mental and written methods** **Grid method** 35 x 2= 70 (TU x U) Partition and introduce the grid methods as early into Year 3 as possible. | x | 30 | 5 | | 2 | 60 | 10 |

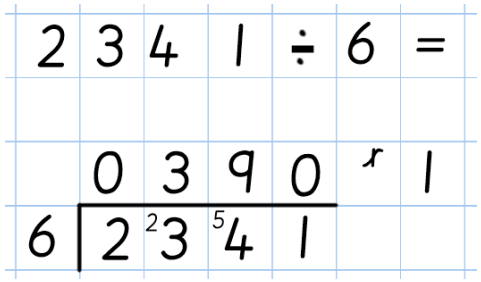
	= 30 **<u>Number lines</u>** 6 x 3  	

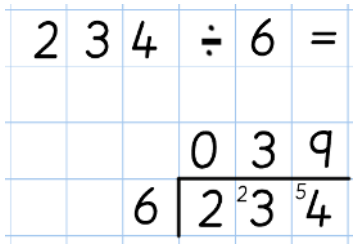
WRITTEN MULTIPLICATION		
Year 4	**Year 5**	**Year 6**
x = signs and missing numbers Continue using a range of equations as in Year 2 but with appropriate numbers **Written methods to include;** **Multiply 2-digit and 3-digit numbers by 1-digit number using formal written methods including long multiplication.**  	**x = signs and missing numbers** Continue using a range of equations as in Year 2 but with appropriate numbers **Written methods to include;** **Multiply numbers up to 4-digits by a 1 or 2-digit number using formal methods, including long multiplication**  	**x = signs and missing numbers** Continue using a range of equations as in Year 2 but with appropriate numbers **Written methods to include;** **Multiply 4-digit whole numbers by 2-digit whole numbers** 3721 x 14 Efficient methods – as in Year 5 **Compact method for decimals** 7 x 3.8 (1 decimal place) 7 x 3.86 (2 decimal places)

123 x 7 = 	1125 x 18 = 	2565 x 0.7 = 

WRITTEN DIVISION		
Year 1	**Year 2**	**Year 3**
With support and real objects solve division calculations **Pictures / marks** 12 children get into teams of 4 to play a game. How many teams are there? 	**÷ = signs and missing numbers** 6 ÷ 2 = □ □ = 6 ÷ 2 6 ÷ □ = 3 3 = 6 ÷ □ □ ÷ 2 = 3 3 = □ ÷ 2 □ ÷ ∇ = 3 3 = □ ÷ ∇ **Understand division as sharing and grouping** **Sharing** – 6 sweets are shared between 2 people. How many do they have each?  6 ÷ 2 can be modelled practically as:	**÷ = signs and missing numbers** Continue using a range of equations as in Level 2 but with appropriate numbers. **Written methods to include;** **Write and calculate using division; 2-digit divide a one-digit; using mental and written methods** **Understand division as sharing and grouping** 18 ÷ 3 can be modelled as: **Sharing** – 18 shared between 3 (see Year 2 diagram) **Grouping** - How many 3's make 18?  Remainders **16 ÷ 3**

	Grouping – There are 6 sweets. How many people can have 2 each? (How many 2's make 6?)  	**Sharing** - 16 shared between 3, how many left over? **Grouping** – How many 3's make 16, how many left over? 

WRITTEN DIVISION		
Year 4	**Year 5**	**Year 6**
÷ = signs and missing numbers **Written methods to include;** **Divide 2-digit and 3-digit numbers by 1-digit number using formal written methods;- interpret remainders as integers.** Sharing and grouping initially **30 ÷ 6** • **grouping** – groups of 6 taken away and the number of groups counted e.g. • **sharing** – sharing among 6, the number given to each person **44 ÷ 4 = 11**  	**÷ = signs and missing numbers** **Written methods to include;** **Divide numbers up to 4-digits by a 1-digit number and 10 (with remainders).** Bus stop method for short division  Remainders To be interpreted depending on the context such as money, decimals if appropriate etc Move onto chunking as long division when children are ready to move onto division by a 2 digit number. E.g. 348 ÷ 12	**÷ = signs and missing numbers** **Written methods to include;** **Divide numbers up to 4-digits by a 2-digit whole numbers and recognise remainders as whole numbers, fractions, decimals or by rounding.** Divide 4 digits by 2 digits. **826 ÷ 12**

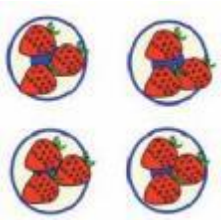
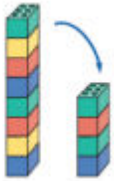
0 40 44 **<u>Moving onto;</u>** Bus stop method for short division  		12 | 826 - 600 (50 x 12) 226 - 120 (10 x 12) 106 -60 (5 x 12) 46 - 36 (3 x 12) 10 **Include fact boxes for; x1, x2, x5, x10, x20** <u>Remainders</u> Quotients expressed as fractions or decimal fractions 676 ÷ 8 = 84.5

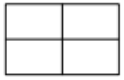
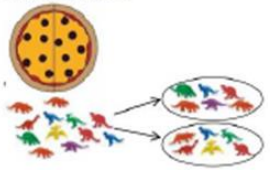
1. **Fractions, Decimals and Percentages Policy**

Fractions, Decimals and Percentages Policy 2019

Use Singapore bar as a visual when and where needed.

Year 1

Objective	Examples	Models and Images
Recognising Fractions Recognise, find and name a half as one of two equal parts of an object or shape.	Find halves of shapes by folding. • Find half of a variety of paper shapes by folding them in different ways into equal parts.  • Shade half of each shape. 	
Recognising Fractions Recognise, find and name a half as one of two equal parts of a quantity.	Choose a number of counters. Place them onto 2 plates so that there is the same number on each half. When can you do this and when can't you? What do you notice? Find one half of a set of up to 20 objects, e.g. • Mary eats half of these cherries. How many does she eat?  • Using more than 10 cubes, make a stick of cubes which is half red and half blue. • Ring one half of this set of 10 buttons. 	 What is half of 8? Half of 8 is 4.

Recognising Fractions Recognise, find and name a quarter as one of four equal parts of an object or shape.	Find $\frac{1}{2}$ and $\frac{1}{4}$ of shapes, e.g. • Find $\frac{1}{2}$, $\frac{1}{4}$ of a variety of paper shapes by folding them in different ways into 2 then 4 equal parts.  Shade $\frac{1}{2}$, $\frac{1}{4}$ of various shapes divided into 4 equal parts, e.g. • Draw this rectangle.  Colour $\frac{1}{2}$ blue, $\frac{1}{4}$ red and $\frac{1}{4}$ green.	  An array can be used to demonstrate sharing. Sharing – sharing the counters among 4 people, each person gets 3. Grouping- 3 groups/ lots of 4. Can you cut the pizza in half? 
Recognising Fractions Recognise, find and name a quarter as one of four equal parts of a quantity.	Choose a number of counters. Place them onto 4 plates so that there is the same number on each quarter. When can you do this and when can't you? What do you notice? Mary puts a quarter of these buttons in a box. How many does  	

Year 2

Counting in Fractional Steps

Pupils should count in <u>fractions up to 10,</u> starting from any number and using the 1/2 and 2/4 equivalence on the number line.

Spot the mistake

7, 7 ½ , 8, 9, 10

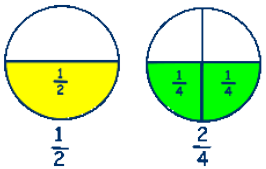
8 ½, 8, 7, 6 ½,

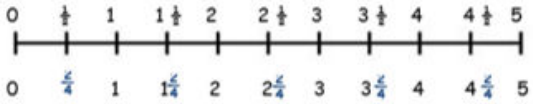
What comes next?

5 ½, 6 ½ , 7 ½ , …., ….

9 ½, 9, 8 ½, ……, …..

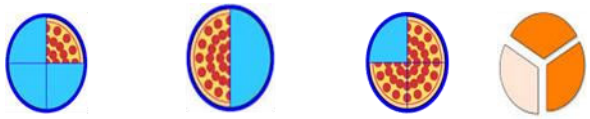
… and correct it

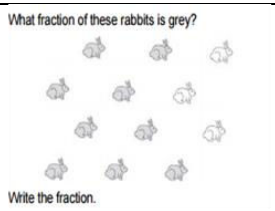
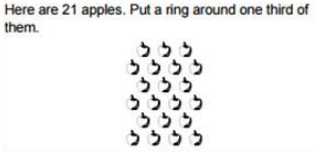
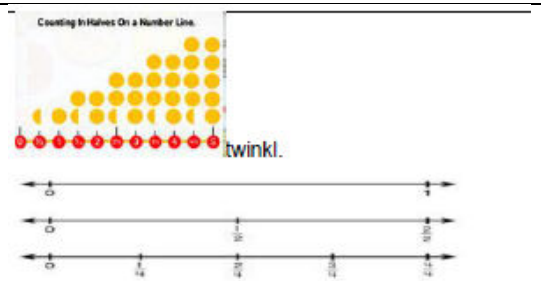
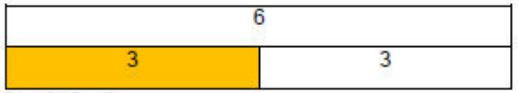
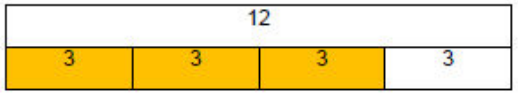
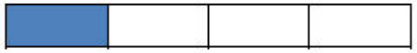




Recognising Fractions

Recognise, find, name and write fractions $^{1}/_{3}$, $^{1}/_{4}$, $^{2}/_{4}$ and $^{3}/_{4}$ of shape.

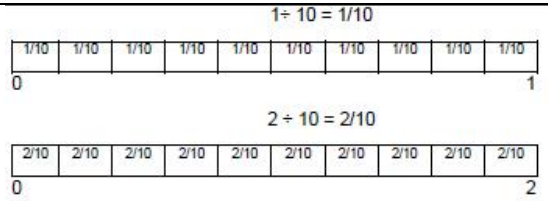


Recognising Fractions Recognise, find, name and write fractions $^{1}/_{3}$, $^{1}/_{4}$, $^{2}/_{4}$ and $^{3}/_{4}$ of a set of objects.	 Jack ate half the cherries on the plate. These are the cherries that were left.  How many cherries were on Jack's plate before he ate half of them? 	 Bar model ½ of 6 = 3  ¾ of 12 = 9  If I can see ¼ how many quarters can you see?  If I can see 2/3 how many thirds can you see? 
Recognising Fractions Recognise, find, name and write fractions $^{1}/_{3}$, $^{1}/_{4}$, $^{2}/_{4}$ and $^{3}/_{4}$ of length.	Gemma has 60cm of ribbon. If she cuts off half how much does she have left? **True or false?** Half of 20cm = 5cm ¾ of 12cm = 9cm	
Recognising Fractions Recognise, find, name and write fractions $^{1}/_{3}$, $^{1}/_{4}$, $^{2}/_{4}$ and $^{3}/_{4}$ of numbers.	Find… $^{1}/_{4}$ of 40 $^{2}/_{4}$ of 40 $^{3}/_{4}$ of 40 $^{4}/_{4}$ of 40 Look at relationships between and the equivalent fractions. Then try: $^{3}/_{4}$ of 40 = $^{1}/_{3}$ of 21 =	

Year 3

Counting in Fractional Steps
Count up and down in tenths.

0.1, 0.2, 0.3, 0.4, 0.5, 0.6,
$^{1}/_{10}$, $^{2}/_{10}$, $^{3}/_{10}$, $^{4}/_{10}$, $^{5}/_{10}$, $^{6}/_{10}$
0.7, 0.8, 0.9, 1.0
$^{7}/_{10}$, $^{8}/_{10}$, $^{9}/_{10}$, $^{10}/_{10}$
7.6, 7.7, 7.8, 7.9, 8.0
$7\ ^{6}/_{10}$, $7\ ^{7}/_{10}$



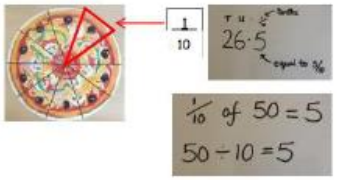
Recognising Fractions
Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.

Liz drank $^{1}/_{3}$ of her drink. If there is 200ml left, how much drink was there to begin with?

100	100	

Harry ate $^{1}/_{4}$ of the sweets. If there are 12 sweets left, how many sweets were there to start with?

4	4	4	



¾ of 12 = 9

12			
3	3	3	3

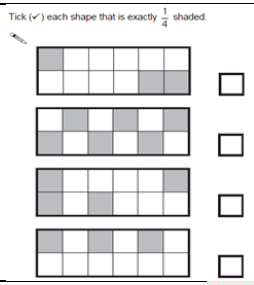
Recognising Fractions
Recognise that tenths arise from dividing an object into 10 equal parts and in dividing one – digit numbers or quantities by 10.

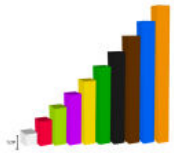
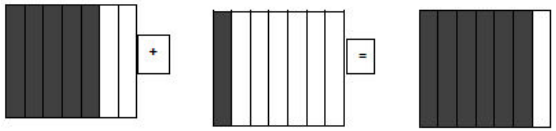
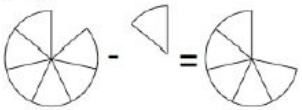
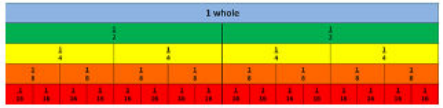
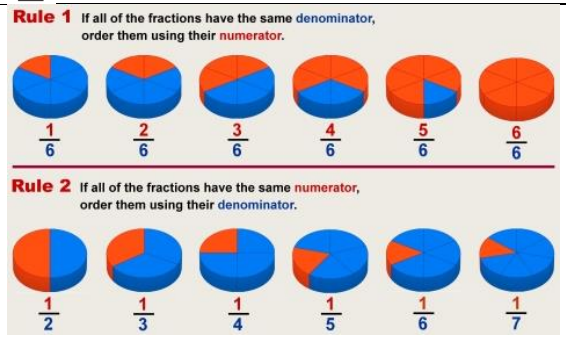
$^{1}/_{10}$ of 10=1
$^{2}/_{10}$ of 10=2
$^{1}/_{10}$ of 20=2
$^{2}/_{10}$ of 20=4
True or false- $^{3}/_{10}$ of 20 = 5?

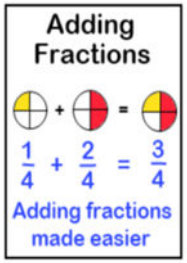
Recognising Fractions
Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators

$\frac{1}{7}$ of 21 =

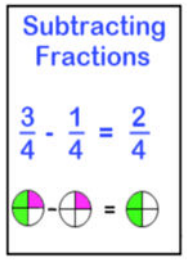
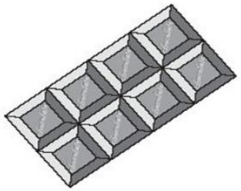
$\frac{2}{5}$ of 30

<table>
<tr>
<td>Recognising Fractions
Recognise and show, using diagrams, equivalent fractions with small denominators</td>
<td> 

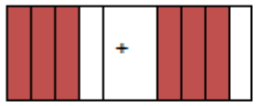
$\frac{1}{6} = \frac{?}{30}$</td>
<td rowspan="3">Use Cuisenaire rods to develop vocabulary of equivalence.
 
 
$^{6}/_{7} - {}^{1}/_{7} = {}^{5}/_{7}$
 
 
</td>
</tr>
<tr>
<td>Comparing and ordering Fractions
Compare and order unit fractions, and fractions with the same denominators</td>
<td> 

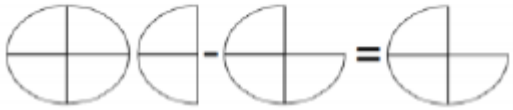
Ordering without pictures
Order these fractions from smallest to largest:
$^{1}/_{7}$, $^{1}/_{5}$, $^{1}/_{10}$, $^{1}/_{3}$</td>
</tr>
<tr>
<td>Addition of Fractions
Add fractions with the same denominator within one whole (e.g. $^{5}/_{7} + {}^{1}/_{7} = {}^{6}/_{7}$)</td>
<td> 

$^{5}/_{7} + {}^{1}/_{7} = {}^{6}/_{7}$</td>
</tr>
</table>

Subtraction of Fractions Subtract fractions with the same denominator within one whole (e.g. $^5/_7 - ^1/_7 = ^4/_7$)	 $^5/_7 - ^1/_7 = ^4/_7$	
Problem Solving Fractions Solve problems that involve all of the above	Here is a chocolate bar.  William eats 3 pieces and Amber eats 2 pieces. What **fraction** of the chocolate bar **remains**? Sarah has a packet of balloons.  The contents of the packet are 5 red balloons 5 blue balloons 10 yellow balloons Sarah says, ***'One-quarter of the balloons are red'.*** Is Sarah correct? Circle **Yes** or **No**.	
# Year 4		
Recognising Fractions Recognise and show, using diagrams, families of common equivalent fractions	 $\frac{1}{2}$ (One-Half) $\frac{1}{4}$ (One-Quarter) $\frac{3}{8}$ (Three-Eighths) Find $^4/_6$ of 24 Find $^2/_3$ of 24 What do you notice? Can you write any other similar statements?	**Odd one out.** Which is the odd one out in each of these trio $^3/_4$ $^9/_{12}$ $^4/_6$ $^9/_{12}$ $^{10}/_{15}$ $^2/_3$ Why? **What do you notice?**

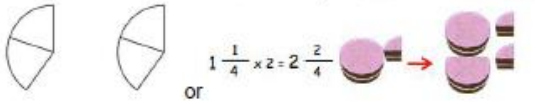
<table>
<tr>
<td>Counting in Fractional Steps
Count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10</td>
<td>Spot the mistake
sixty tenths, seventy tenths, eighty tenths, ninety tenths, twenty tenths
… and correct it.
What comes next?
$^{83}/_{100}$, $^{82}/_{100}$, $^{81}/_{100}$, ….., ….., …..
$^{31}/_{100}$, $^{41}/_{100}$, $^{51}/_{100}$, ….., …..,</td>
<td rowspan="4"> 
Use the rows of a multiplication square to show equivalence e.g:
½, 2/4, 3/6, 4/8
2/3, 4/6. 6/9, 8/12.
 

 
Count back in 1 and 1/10 from 101.
¾ + ¾ = $^{6}/_{4}$
 
 

$^{6}/_{4}$ - $^{3}/_{4}$ = $^{3}/_{4}$
  </td>
</tr>
<tr>
<td>Addition and Subtraction of Fractions
Add and subtract fractions with the same denominator</td>
<td>$^{1}/_{5} + {}^{2}/_{5} = {}^{3}/_{5}$
$^{6}/_{10} - {}^{4}/_{10} = {}^{2}/_{10}$</td>
</tr>
<tr>
<td>Comparing/Rounding Decimals
Round decimals with 1 decimal place to the nearest whole number
Compare numbers with the same number of decimal places up to 2 decimal places</td>
<td>Do, then explain
Circle each decimal which when rounded to the nearest whole number is 5.
5.3 5.7 5.2 5.8
Explain your reasoning
Top tips
Explain how to round numbers to one decimal place?
Also see rounding in place value</td>
</tr>
<tr>
<td>Equivalence including fractions and decimals
Recognise and write decimal equivalents of any number of tenths or hundreds
Recognise and write decimal equivalents to 1/4 , 1/2 , 3/4</td>
<td>Complete the pattern by filling in the blank cells in this table:
<table>
<tr><td>1
10</td><td>2
10</td><td>3
10</td><td></td></tr>
<tr><td>10
100</td><td>20
100</td><td></td><td>40
100</td></tr>
<tr><td>0.1</td><td></td><td>0.3</td><td></td></tr>
</table>
Another and another
Write a decimal numbers (to one decimal place) which lies between a half and three quarters?
… and another, … and another, …
Ordering</td>
</tr>
</table>

	Put these numbers in the correct order, starting with the smallest. $^1/_4$ 0.75 $^5/_{10}$ Explain your thinking	
Multiplication and Division of Decimals Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths	**Undoing** I divide a number by 100 and the answer is 0.3. What number did I start with? **Another and another** Write down a number with one decimal place which when multiplied by 10 gives an answer between 120 and 130. ... and another, … and another, …	
Problem Solving Fractions Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number Solve simple measure and money problems involving fractions and decimals to 2 decimal place.	¾ of the class are going on a school trip. There are children in the class. How many children are not going on the school trip? A jacket in a shop costs £25. It is reduced in the sale by 20%. What is the new price of the jacket?	

Year 5

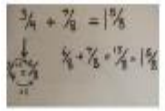
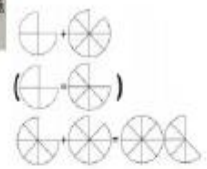
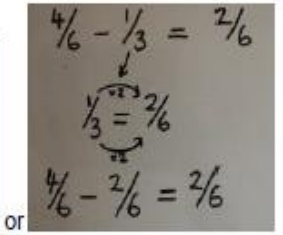
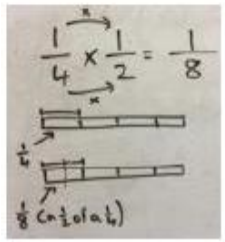
Recognising Fractions Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents (appears also in Equivalence) Continue the pattern	**What do you notice?** One tenth of £41 One hundredth of £41 One thousandth of £41 What do you notice? 0.085 + 0.015 = 0.1 0.075 + 0.025 = 0.1 Continue the pattern for the next five number sentences. **True or false?** 0.1 of a kilometre is 1m. 0.2 of 2 kilometres is 2m. 0.3 of 3 Kilometres is 3m (see below) 3km- 3000m. below this has been shared equally into 10 parts. Each part representing 0.1 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 300 + 300 + 300= 900m so 0.3 of 3km is 3m is false. 0.25 of 3m is 500cm. $^2/_5$ of £2 is 20p (see below) e.g. Singapore Bar Method 40p | 40p | 40p | 40p | 40p 40 + 40 = 80p so $^2/_5$ of £2 is 20p is false.	 I eat 1 more piece of this cake. What fraction would be left? $^6/_4 - {}^3/_4 = {}^3/_4$  2/5 x 2 =  or
Ordering and comparing Fractions Ordering and comparing decimals.	Put these numbers into ascending/descending order. Which digit do you have to look at to work this out? 5.51, 3.75, 7.35, 5.73, 3.77 Give an example of a fraction that is more than three quarters. Now another example that no one else will think of. Explain how you know the fraction is more than three quarters. Imran put these fractions in order starting with the smallest. Are they in the correct order? Two fifths, three tenths, four twentieths How do you know?	

Ordering and comparing Fractions Read, write, order and compare numbers with up to three decimal places (Cover during PV)	**Missing symbol** Put the correct symbol < or > in each box 4.627 ☐ 4.06 12.317 ☐ 12.31 What needs to be added to 3.63 to give 3.13? What needs to be added to 4.652 to give 4.1?	
Comparing/Rounding Decimals Round decimals with two decimal places to the nearest whole number and to one decimal place (PV Week)	**Do, then explain** Circle each decimal which when rounded to one decimal place is 6.2. 6.32 6.23 6.27 6.17 Explain your reasoning **Top tips** Explain how to round decimal numbers to one decimal place? *Also see rounding in place value*	
Equivalence including fractions and decimals Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	**Odd one out.** Which is the odd one out in each of these collections of 4 fractions $^{6}/_{10}$ $^{3}/_{5}$ $^{18}/_{20}$ $^{9}/_{15}$ $^{30}/_{100}$ $^{3}/_{10}$ $^{6}/_{20}$ $^{3}/_{9}$ Why? **What do you notice?** Find $^{30}/_{100}$ of 200 Find $^{3}/_{10}$ of 200 What do you notice? Can you write any other similar statements?	
Equivalence including fractions and decimals Read and write decimal numbers as fractions (e.g. 0.71 = $^{71}/_{100}$) Recognise and use thousandths and relate them to tenths,	**Complete the pattern** $\frac{71}{100}$ $\frac{??}{100}$ $\frac{??}{100}$ $\frac{??}{100}$ 0.71 | 0.81 | ??? | ??? Complete the table. **Another and another** Write a fraction with a denominator of one hundred which has a value of more than 0.75?	

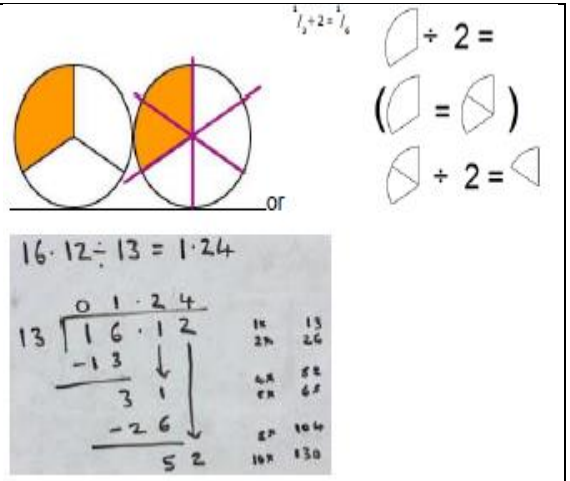
hundredths and decimal equivalents	… and another, … and another, …	
Equivalence including fractions and decimals Recognise the per cent symbol (%) and understand that per cent relates to "number of parts per hundred", and write percentages as a fraction with denominator 100 as a decimal fraction	**Ordering** Put these numbers in the correct order, starting with the largest. $^{7}/_{10}$, 0.73, $^{7}/_{100}$, 0.073 71% Explain your thinking Which is more: 20% of 200 or 25% of 180? Explain your reasoning.	
Addition and Subtraction of Fractions Add and subtract fractions with the same denominator and multiples of the same number	**What do you notice?** ¾ and ¼ = $^{4}/_{4}$ = 1 $^{4}/_{4}$ and ¼ = $^{5}/_{4}$ = 1 ¼ $^{5}/_{4}$ and ¼ = $^{6}/_{4}$ = 1 ½ Continue the pattern up to the total of 2.	
Recognise and convert Fractions Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a	Can you make up a similar pattern for subtraction? The answer is 1 $^{2}/_{5}$, what is the question	

mixed number (e.g. $^{2}/_{5} + {}^{4}/_{5} = {}^{6}/_{5} = 1{}^{1}/_{5}$)		
Multiplication and Division of Decimals Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	**Continue the pattern** ¼ x 3 = ¼ x 4 = ¼ x 5 = Continue the pattern for five more number sentences. How many steps will it take to get to 3? $^{5}/_{3}$ of 24 = 40 Write a similar sentence where the answer is 56. The answer is 2 ¼ , what is the question Give your top tips for multiplying fractions. **Undoing** I divide a number by 100 and the answer is 0.33 What number did I start with? **Another and another** Write down a number with two decimal places which when multiplied by 100 gives an answer between 33 and 38. ... and another, … and another, …	
Problem Solving Fractions Solve problems involving numbers up to three decimal places	Applying RUCSAC to FDP problems	
Problem Solving Fractions Solve problems which require knowing percentage and decimal equivalents of $^{1}/_{2}$, $^{1}/_{4}$, $^{1}/_{5}$, $^{2}/_{5}$, $^{4}/_{5}$ and those	Applying RUCSAC to fractions, decimals and percentages word problems	

with a denominator of a multiple of 10 or 25.		
Year 6		
Compare and order Fractions Compare and order fractions, including fractions >1.	**Assessment**: Match equivalent fractions, on cards or interactive games e.g $^{3}/_{4} = {}^{75}/_{100} = {}^{12}/_{16}$ Finding the LCM of the denominators e.g. $^{3}/_{5}$, $^{1}/_{4}$, $^{2}/_{8} = {}^{?}/_{40}$ Is $^{3}/_{5} > {}^{2}/_{8}$? Review mixed and improper fractions e.g. $2\,{}^{2}/_{3} = {}^{8}/_{3}$ Is $1\,{}^{1}/_{2} > {}^{14}/_{8}$ Sam put these fractions in order starting with the smallest. Are they in the correct order? Thirty three fifths Twenty three thirds	

	Forty five sevenths How do you know? Give an example of a **fraction** that is greater than 1.1 and less than 1.5. Now another example that no one will think of. Explain how you know.	 
Identify value of digits in decimals Identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places. Multiply one-digit numbers with up to two decimal places by whole numbers.	**PLACE VALUE HAS TO BE SOLID AT THIS POINT** **Assessment:** **True or false?** In all of the numbers below, the digit 6 is worth <u>more than</u> 6 hundredths. 3.6 3.063 3.006 6.23 7.761 3.076 Is this true or false? Change some numbers so that it is true Show that 6.543 is equivalent to 6 $^{543}/_{1000}$ – what needs to be added to make a whole thousand? What needs to be added to 6.543 to give 7? What needs to be added to 3.582 to give 5? Suggest a fraction between 3.62 and 3.63 Circle the two decimals which are closest in value to each other. 0.9 0.09 0.99 0.1 0.01 Circle two decimals that make up a whole 0.324, 0.538, 0.119, 0.676 Convert a larger metric unit to a smaller e.g. 3.125Km = 3125m What do you notice? ½ x ¼ =	 or  

<table>
<tr>
<td>Simplify using common factors

Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.</td>
<td>Odd one out.
Which is the odd one out in each of these collections of 4 fraction
s¾ $^{9}/_{12}$ $^{26}/_{36}$ $^{18}/_{24}$
$^{4}/_{20}$ $^{1}/_{5}$ $^{6}/_{25}$ $^{6}/_{30}$
Why?
What do you notice?
$^{8}/_{5}$ of 25 = 40
$^{5}/_{4}$ of 16 = 20
$^{7}/_{6}$ of 36 = 42
Can you write similar statements?</td>
<td rowspan="3"> 

</td>
</tr>
<tr>
<td>Equivalence including fractions and decimals
Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $^{3}/_{8}$).</td>
<td>Complete the pattern
<table><tr><td>$^{1}/_{8}$</td><td>$^{2}/_{8}$</td><td>$^{3}/_{8}$</td><td>$^{4}/_{8}$</td></tr><tr><td>0.375</td><td>???</td><td>???</td><td>???</td></tr></table>
Complete the table.

Another and another Write a unit fraction which has a value of less than 0.5?
… and another, … and another, …</td>
</tr>
<tr>
<td>Equivalence including fractions and decimals
Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.</td>
<td>Ordering
Recognise patterns in equivalent fractions, e.g. for one half, one third, one quarter, one fifth and one tenth.
Recognise that a fraction can be:
reduced to an equivalent fraction by dividing both numerator and denominator by the same number, which is called cancelling, e.g.
$^{5}/_{20} = {}^{5 \div 5}/_{20 \div 5} = {}^{1}/_{4}$
Which is larger, $^{1}/_{3}$ or $^{2}/_{5}$? Explain how you know
Understand decimals up to 3 places.
5.251, 5.3, 5.708, 5.009, 5.15
Suggest a decimal fraction between 4.17 and 4.18</td>
</tr>
</table>

	Put the following amounts in order, starting with the largest. 23%, $^{5}/_{8}$, $^{3}/_{5}$, 0.8	
Addition and Subtraction of Fractions (Different denominators) Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions .	**Another and another** Write down two fractions which have a difference of $1\ ^{2}/...$ and another, … and another, … **Another and another** Write down 2 fractions with a total of $3\ ^{4}/_{5}$. … and another, … and another, …	
Multiply and Divide proper Fractions Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $^{1}/_{4} \times {}^{1}/_{2} = {}^{1}/_{8}$). Divide proper fractions by whole numbers (e.g. $^{1}/_{3} \div 2 = {}^{1}/_{6}$).	**Continue the pattern** $^{1}/_{3} \div 2 = {}^{1}/_{6}$ $^{1}/_{6} \div 2 = {}^{1}/_{12}$ $^{1}/_{12} \div 2 = {}^{1}/_{24}$ The answer is $^{1}/_{8}$, what is the question (involving fractions / operations) Give your top tips for dividing fractions.	

Converting Decimals and Fractions using Division Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $^{3}/_{8}$) . Use written division methods in cases where the answer has up to two decimal places.	When I divide a number by 1000 the resulting number has the digit 6 in the units and tenths and the other digits are 3 and 2 in the tens and hundreds columns. What could my number have been? **Undoing** I multiply a number with three decimal places by a multiple of 10. The answer is approximately 3.21 What was my number and what did I multiply buy?	
Problem Solving using Fractions Solve problems which require answers to be rounded to specified degrees of accuracy.	**Assessment:** **Do, then explain** Write the answer of each calculation rounded to the nearest whole number 75.7 × 59 7734 ÷ 60 772.4 × 9.7 20.34 × (7.9 – 5.4) **What's the same, what's different?** … when you round numbers to one decimal place and two decimal places? *Also see rounding in place value*	

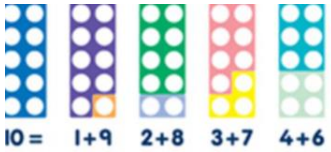
2. Models and Images Policy

Addition		
Year 1	**Year 2**	**Year 3**

Year 1

+ = signs and missing numbers

3 + 4 = □ □ = 3 + 4
3 + □ = 7 7 = □ + 4
□ + 4 = 7 7 = 3 + □
□ + ∇ = 7 7 = □ + ∇

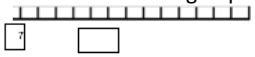


3 + 4 is the same as 7 as modelled using Numicon
Use Numicon to further understand the equivalence in a number sentence.
Promoting covering up of operations and numbers.

Using Number lines

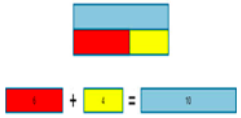
(Teacher model number tracks and lines with numbers and with missing numbers)

7 + 4 = 11 Children go up in 1s



Year 2

+ = signs and missing numbers

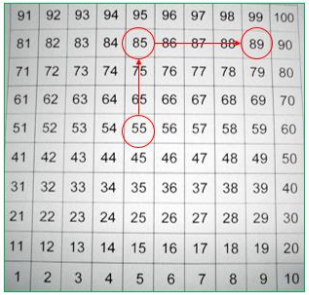


Adding three numbers

34 + 5 = 30 + □ + □
32 + □ + □ = 100 35 = 1 + □ + 5

Partition into tens and ones

How to use a hundred square...



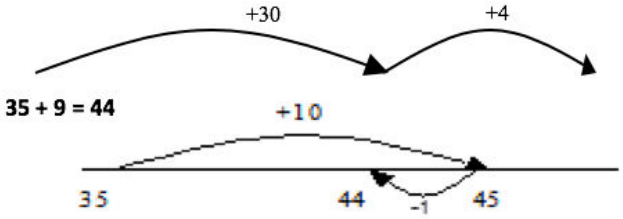
Lets solve

55 + 34 = ?

55 + 30 = 85

85 + 4 = 89

So 55 + 34 = 89



Ensure that the digits are lined up correctly.

Secure with addition

Year 3

Partition into tens and ones and recombine

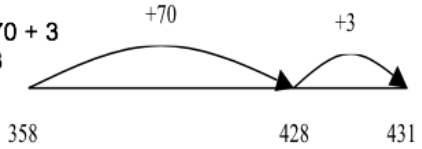
Consolidate:.

36 + 53 = 53 + 30 + 6
= 83 + 6
= 89

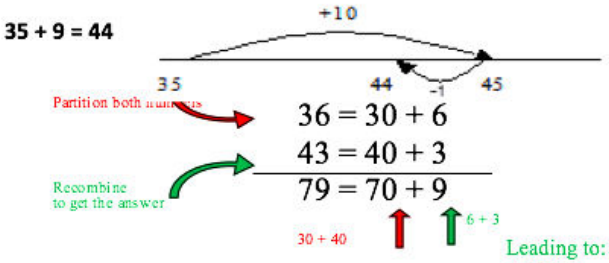
Partition into hundreds, tens and ones and recombine

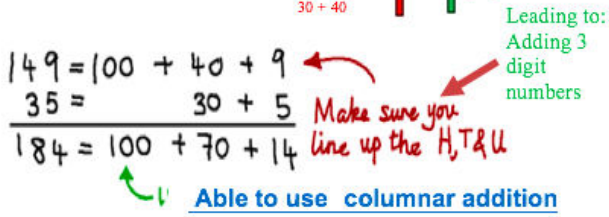
Partition the second number only e.g.

358 + 73 = 358 + 70 + 3
= 428 + 3
= 431



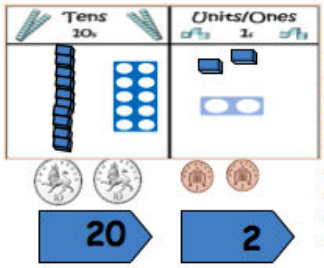
Adding 9 or 11 by adding 10 and adjusting by 1



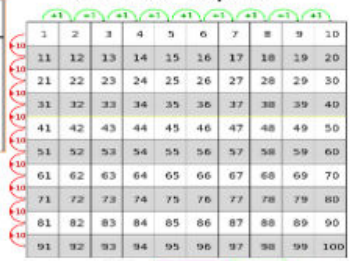


Able to use columnar addition

Able to use a hundred square securely for addition.

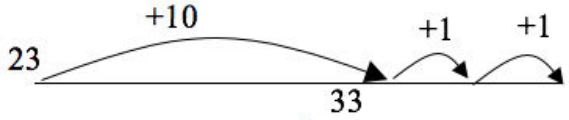


Number Square



Partition the second number only

23 + 12 = 23 + 10 +1 + 1 = 33 +



□ + □ = □ → □ = □ + □

123 = 100 + 20 + 3
+ 45 = 40 + 5
168 = 100 + 60 + 8

Is the same as:

H	T	U
1	2	3
+	4	5
1	6	8

□ = □ + □ → □ + □ = □ + □

Remember to line up the HTU.

	4	6 7
+	2	1 5
	6	8 2
	1	

Because 7 + 5 = 12 we have to carry the 10.

□ + □ = □ + □ →

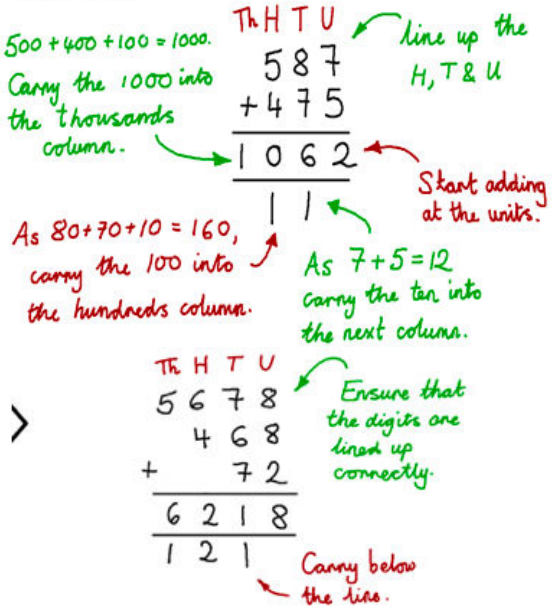
□ + □ = □ + □ → □ + □ = □ - □

Addition

Year 4

Pencil and paper procedures

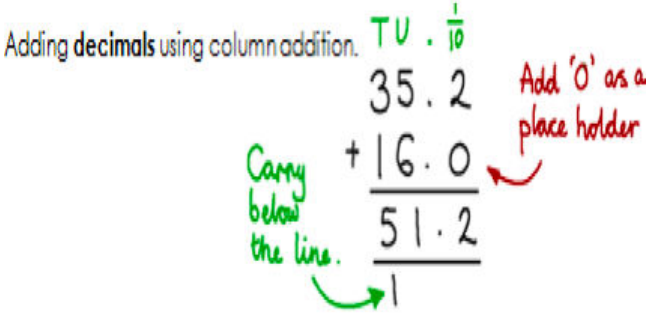
Leading to formal method, showing numbers carried underneath

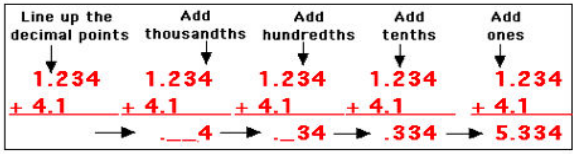


Year 5

Pencil and paper procedures

Extend to decimals (same number of decimals places) and adding several numbers (with different numbers of digits).



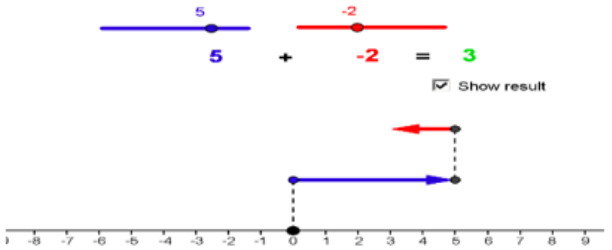


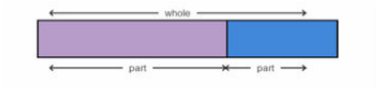
1.830
21.105
236.800
+ 0.900
260.635

Year 6

Pencil and paper procedures

Explore addition of numbers through games, puzzles, arithmagons Extend to use of decimals.



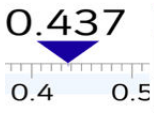


Find two **square numbers** that total 45

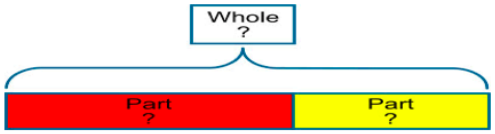
□ + □ = 45

Write in the missing digits.

□□ + □□ + □□ = 201

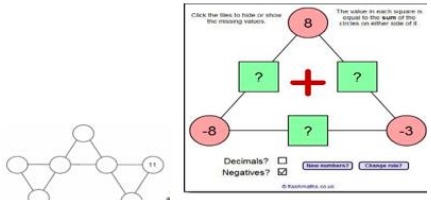


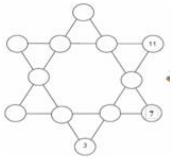
hundreds	tens	ones		tenths	hundredths
		0	.	1	5
		0	.	6	

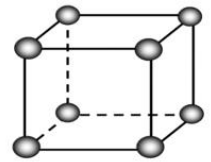


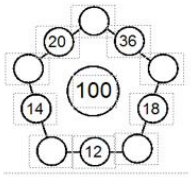
□ + □ = □ + □

□ + □ = □ - □







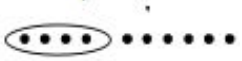


Subtraction

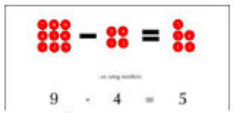
Years 1 and 2

Pictures / marks

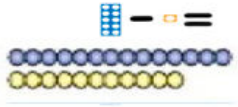
Sam spent 4p. What was his change from 10p



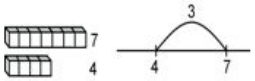
Visual / practical activities



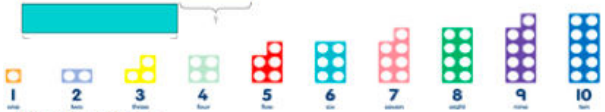
= signs and missing numbers



7 - 3 = □ □ = 7 - 3
7 - □ = 4 4 = □ - 3
□ - 3 = 4 4 = 7 - □
□ - ∇ = 4 4 = □ - ∇

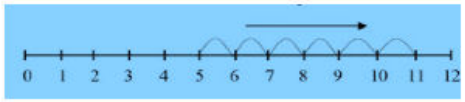


The difference between 7 and 4 is 3.



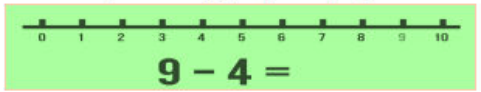
Number lines

Understand subtraction as finding the "difference"



Establish **counting on** as a strategy when the numbers are

Record by - drawing jumps on prepared lines



Understand subtraction as take-away

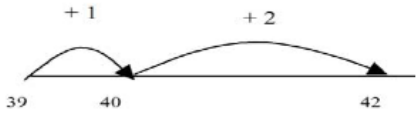
Establish **counting back** as a strategy.

10 – 3 = _____

Years 3 and 4

- = signs and missing numbers

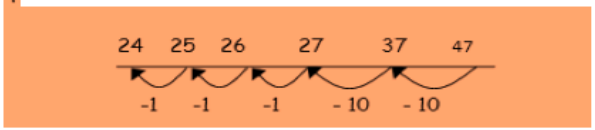
Continue using a range of equations as in Stage 1 but with appropriate numbers.

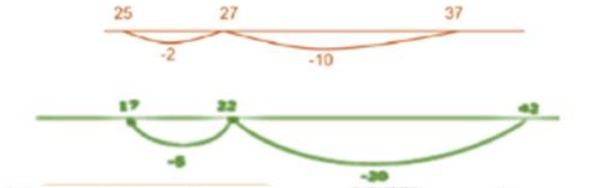


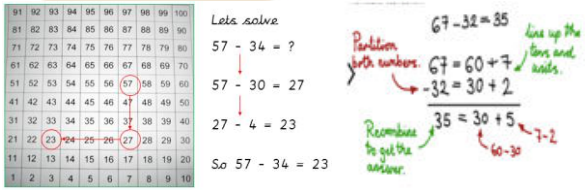
Consolidate **counting on** as a strategy when the numbers are

37 – 12 =

4 Leading to **counting back,** first in 10s then 1s.







181 – 57

		70	11
	181	=	100 + 80 + 1
-	57	=	50 + 7
	124		100 + 20 + 4

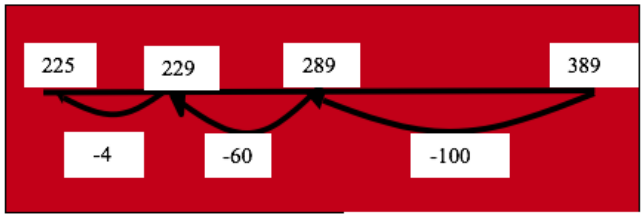
Years 5 and 6

Find a small difference by counting on

102 – 97 = 508 – 317 = 1002 -781 =

Note: Counting back is not always the most efficient method when the numbers are closer together. Reinforce concept with practical strategies essential to see 'difference'.

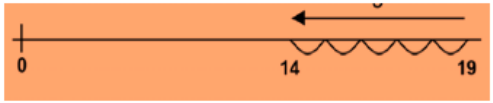
389 – 164 = 225



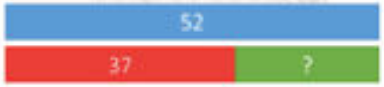
Leading to expanded method without borrowing

Leading to expanded method with borrowing

Constructing own lines, if appropriate: -5



Leading to **counting back,** first in 10s then 1s



52 - ? = 37

774 - 432 =

774 = 700 + 70 + 4
432 = 400 + 30 + 2

342 = 300 + 40 + 2

889 - 647 = 442

8 8 9
- 6 4 7
4 4 2

935 - 587 =

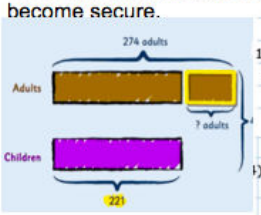
800 +100 +10
935 = 900 + 30 + 5
587 = 500 + 80 + 7

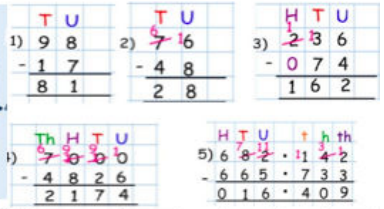
348 = 300 + 40 + 8

1004 – 692 = 442

1000 100
1 0 0 4
- 6 9 2
4 4 2

Use both expanded and compact method together until pupils become secure.





□ - □ = □ □ + □ = □ - □

Multiplication

Year 1

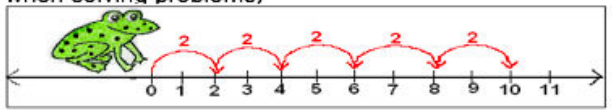
Pitures and symbols

Counting in 2's e.g. socks, shoes, Counting in 5's

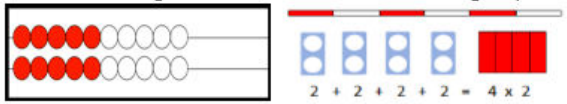
Counting in 10's e.g. fingers, toes…

Counting in 2p's, 5p's, 10p's

(Recording on a number line modelled by the teacher when solving problems)



Use bead strings, bars & Numicons to model groups of



Year 2

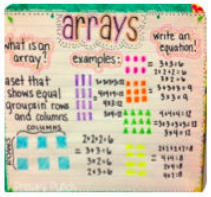
x = signs and missing numbers

7 x 2 = □ □ = 2 x 7

7 x □ = 14 14 = □ x 7

□ x 2 = 14 14 = 2 x □

□ x ∇ = 14 14 = □ x ∇

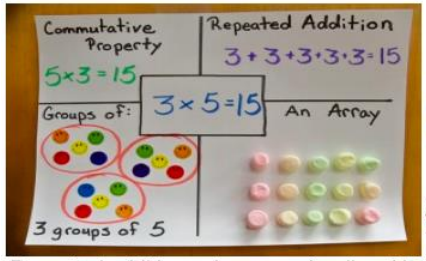


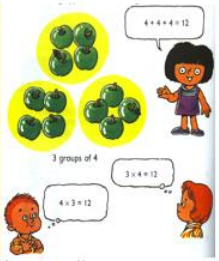
Arrays and repeated addition

● ● ● ● 4 x 2 or 4 + 4

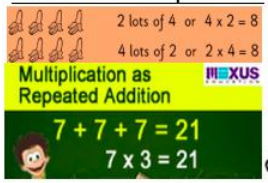
● ● ● ● 2 x 4

or repeated addition 2 + 2 + 2 + 2



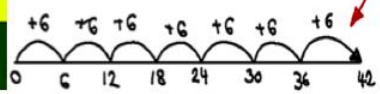


Repeated addition using a number line. Understanding multiplication as repeated addition is key to understanding formal methods of multiplication



6 x 7 = 42

Add 7 lots of 6 on an empty number line.



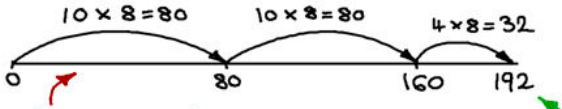
Year 3

x = signs and missing numbers

Continue using a range of equations as in Stage 2 but with appropriate numbers.

24 x 8 = 192

24 lots of 8 have been added in total.



Add 8 in lots of 10

The answer

123 x 4 = 492

H, T & U

100 + 20 + 3

4 | 400 + 80 + 12 = 492

Put the single digit here.

4 x 100

4 x 20

4 x 3

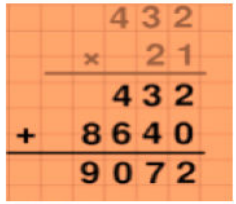
Recombine to get the answer.

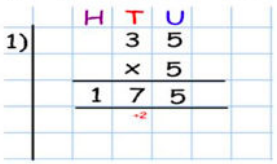
Doubling multiples of 5 up to 100

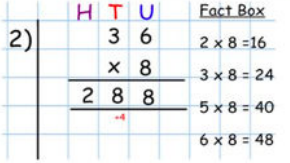
15 x 2 = 30

Partition (10 x 2) + (5 x 2)

20 + 10 = 30





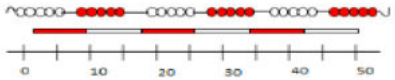


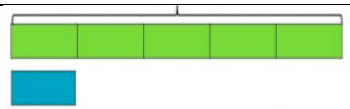
Use cubes and pegs to show arrays and repeated addition leading on to number line.

Begin to learn 2, 5 and 10 times tables.

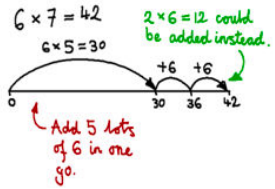
x = signs and missing numbers

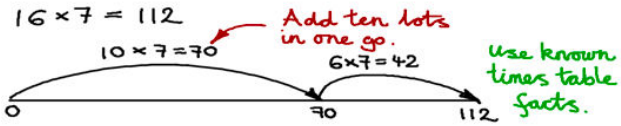
7 x 2 = □ □ = 2 x 7
7 x □ = 14 14 = □ x 7
□ x 2 = 14 14 = 2 x □
□ x ∇ = 14 14 = □ x ∇





5 x 6 =
6 + 6 + 6 + 6 + 6 + 6 =





3)

Th	H	T	U
	4	8	7
		x	9
4	3	8	3

+7 +8

Fact Box
4 x 9 = 36
5 x 9=45
6 x 9=54
7 x 9 = 63
8 x 9 =72

Th	H	T	U
		4	5
	x	8	4
		0	

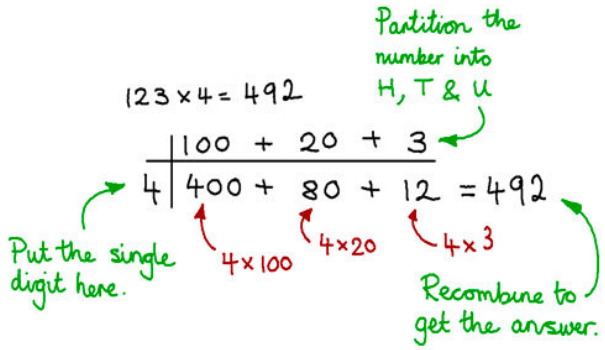
Th	H	T	U
		4	5
	x	8	4
	1	8	0
3	6	0	0
3	7	8	0

Multiplication

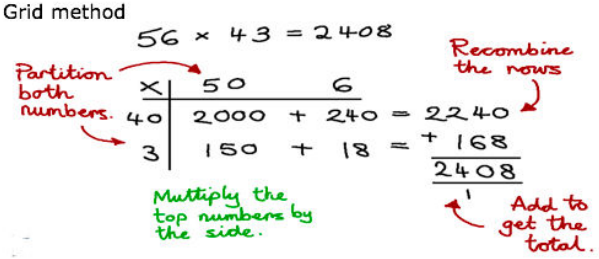
Year 4

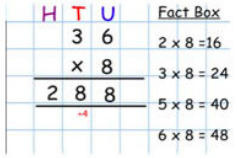
Pencil and paper procedures

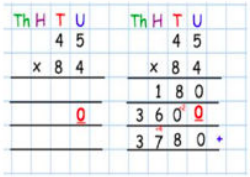
Grid method



Grid method



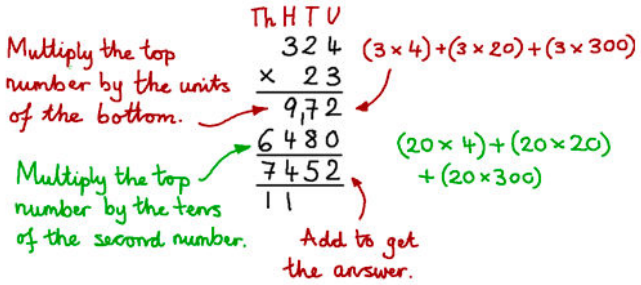


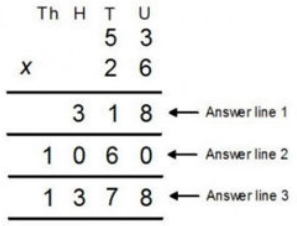


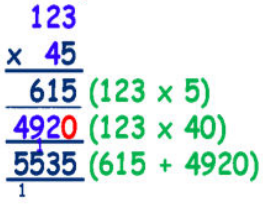
Year 5

x = signs and missing numbers

Pencil and paper procedures







6 2 8
X 2 3 7
4 3 9 6 ones
1 8 8 4 0 tens
1 2 5 6 0 0 hundreds
1 4 8 8 3 6

Year 6

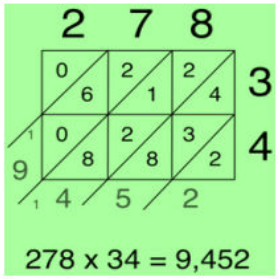
x = signs and missing numbers

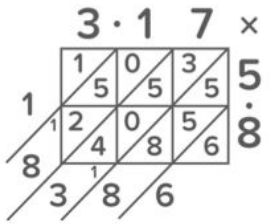
Pencil and paper procedures

3.77 x 2.8

3.77 (2 decimal places)
2.80 (2 decimal places)
Remove the decimals and multiply, then add the decimal point after counting the decimal places in the question.

377
x 280
30160
75400
10.5560





(6 - 9) x 10 ÷ -3 = ?

Multiplying **decimal numbers** using the grid method.

×	5	+	0.2		
6	30	+	1.2	=	31.20
0.3	1.5	+	0.06	=	1.56
					32.76

0.3×0.2

Take care to line up the digits. Adding a place holder will help.

$(6 - 9) \times 10 \div {}^{-}3$

BODMAS Pemdas

$= {}^{-}3 \times 10 \div {}^{-}3$

BODMAS Pemdas

Do Division and Multiplication working from left to right.

$= {}^{-}30 \div {}^{-}3$

1.	2.	3.	4.
B	O	D or M	A or S

$= {}^{+}10$

$= 10$ ✓

Exponent (index or power)

Base

$6^3 = 6 \times 6 \times 6$

Shorthand way of representation

Normal represenatation (Base multiplied exponent number of times)

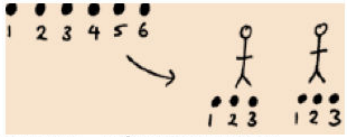
□	+	□	×	□	=	20		
×		+		+				
□	+	□	+	□	=	20		
×		×		−				
□	−	□	×	□	=	− 20		
=		=		=				
20		20		10				

Division

Year 1

Pictures / marks

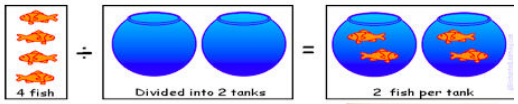
6 mince pies are shared equally between 2 people. How many does each one get?

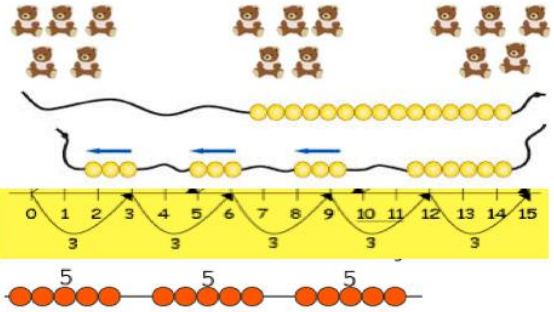


Use practical resources – cubes & counters

6 ÷ 2 = □
6 ÷ □ = 3
□ ÷ 2 = 3
□ ÷ ∇ = 3

□ = 6 ÷ 2
3 = 6 ÷ □
3 = □ ÷ 2
3 = □ ÷ ∇

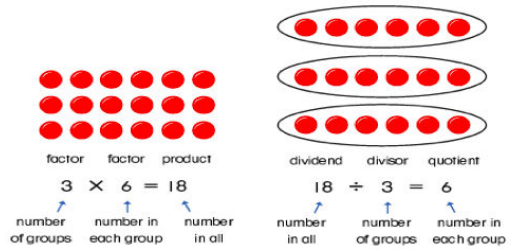




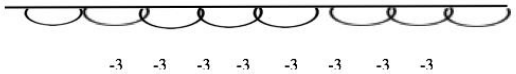
Year 2

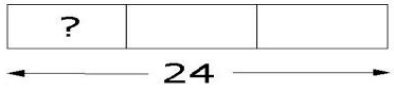
÷ = signs and missing numbers

Understand division as sharing and grouping

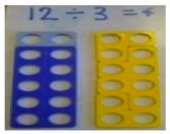


24 ÷ 3 =

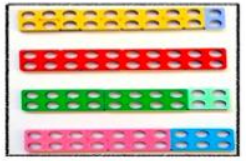




24 ÷ 3 = ?



20 ÷ 3 = 6r2
20 ÷ 5 = 4
20 ÷ 8 = 2r4
20 ÷ 7 = 2r6



Year 3

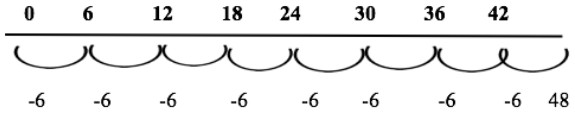
÷ = signs and missing numbers

Continue using a range of equations as in Stage 2 but with appropriate numbers.

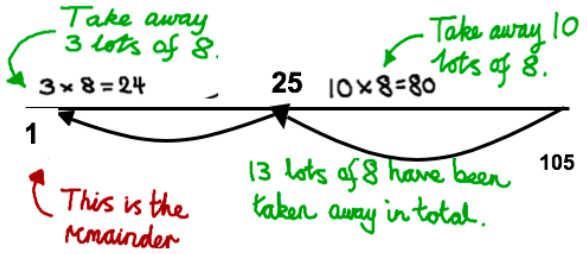
Understand division as sharing and grouping

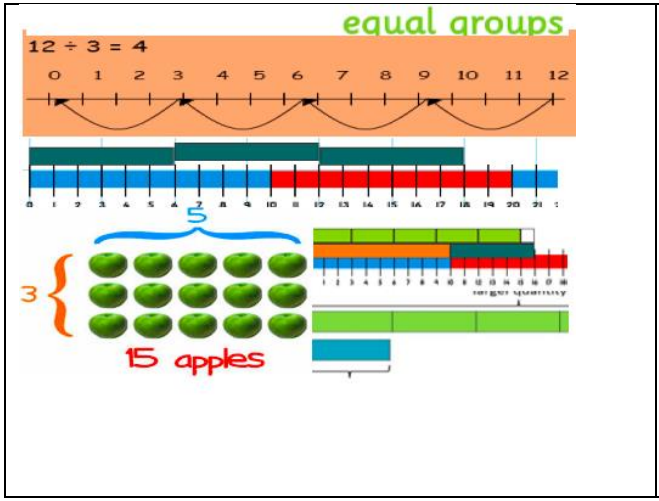
Use repeated subtraction. Subtract 6 repeatedly

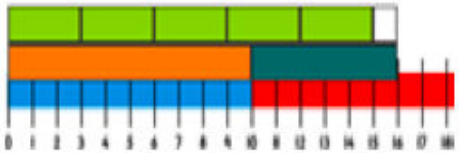
48 ÷ 6 =

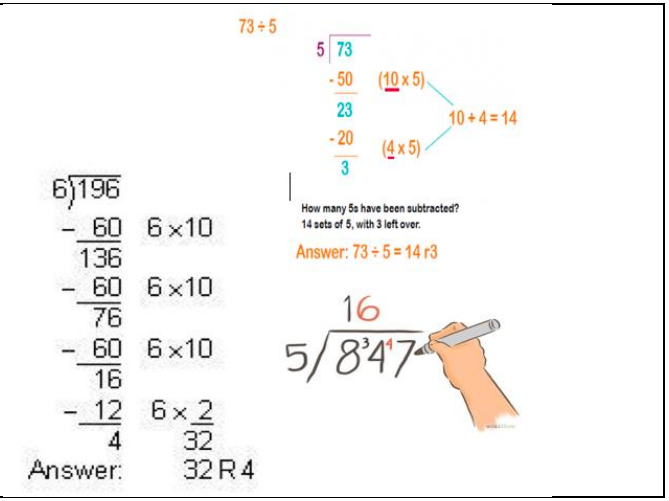


8 lots of 6 has been taken




equal groups
12 ÷ 3 = 4
0 1 2 3 4 5 6 7 8 9 10 11 12
5
3
15 apples




73 ÷ 5
5 73
- 50 (10 x 5)
23
- 20 (4 x 5)
3
10 + 4 = 14
How many 5s have been subtracted?
14 sets of 5, with 3 left over.
Answer: 73 ÷ 5 = 14 r3
6)196
- 60 6 x 10
136
- 60 6 x 10
76
- 60 6 x 10
16
- 12 6 x 2
4 32
Answer: 32 R 4
16
5/8 3 4 1 7

Division

Year 4

÷ = signs and missing numbers

72 ÷ 9 = 8

The dividend goes here.

The divisor goes here.

9 | 72

−45 (5×9) Take away 5 lots then 3 lots of 9.

27

−27 (3×9)

0

Next Steps:

Chunking with remainders.

76 ÷ 8 = 9 r 4

8 | 76

−72 (9×8) 9 lots have been taken away.

This is the remainder → 4

Chunking using times table facts.

Children will continue to explore division as repeated subtraction. They will use their increasing knowledge of times tables to subtract in larger chunks.

128 ÷ 7 = 18 r 2

7 | 128

−70 (10×7) Use the 10 times table to subtract lots of 7.

58

−35 (5×7) Subtract using known times table facts.

23

−21 (3×7)

2 ← The remainder.

Chunking is best used for 2 or more digit divisors, whilst short division is better for 1 digit or simple 2 digit divisors

8 | 9 1 2 4 = 115 r 4

Year 5

Remainders

369 ÷ 14 = 26 r 5

14 | 369

−280 (20×14) Subtract in the largest chunk possible

89

−70 (5×14)

19

−14 (1×14)

5 ← 26 lots have been taken away in total.

Quotients expressed as fractions or decimal fractions

676 ÷ 8 = 84.5

Expressing the remainder as a fraction.

50 ÷ 4 = 12 r 2 ← The remainder.

= 12 2/4 ← The divisor.

This can then be converted into a decimal.

This leads to using short division using decimals

3 | 4.14 = 1.38

7 | 964 = 137 r 5

9 | 4.05 = 0.45

8 | 11.000 = 01.375

Year 6

÷ = signs and missing numbers

4/5 = 5 | 4.0 → 0.80 = 80%

−4.0

0

8 | 48.3

2.4 | 38.4

48 ÷ 8 = 6
4.8 0.8 = 6
480 ÷ 80 = 6
0.48 ÷ 0.08 = 6

30 ÷ -5 + 4 x -2 + 14 = ?

30 ÷ -5 + 4 x -2 + 14 BODMAS

= -6 + 4 x -2 + 14 BODMAS

= -6 + -8 + 14 BODMAS

= -6 + -8 + 14

= -14 + 14

= 0 ✓

Do Addition and Subtraction working from left to right.

1.	2.	3.	4.
B	O	D or M	A or S

Ginny

Paul

7 + 63 ÷ 9 = = ?

1 7 r 7 14) 2 4 ^{10}5	Long division 1 2 r 6 24) 2 9 4 2 4 ^{4}5^{1}4 4 8 6	