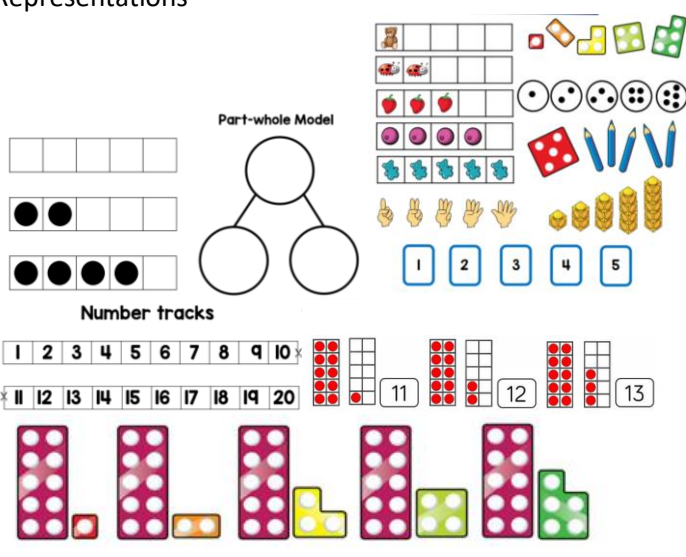
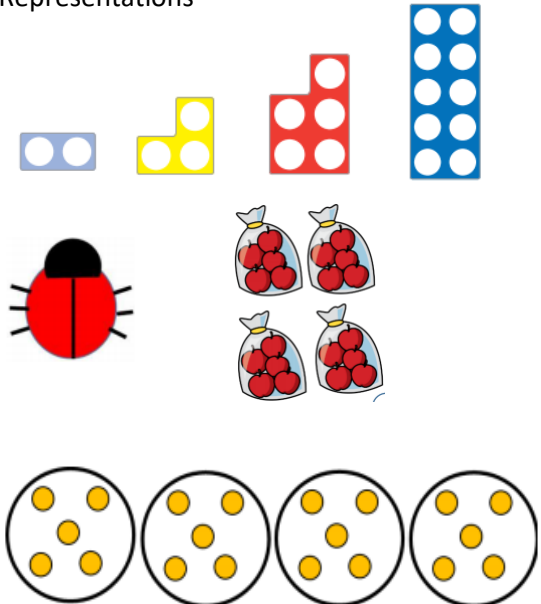
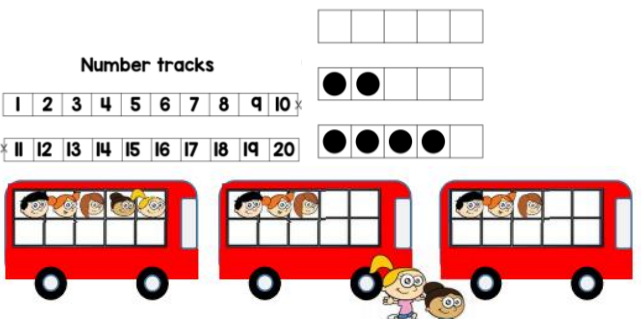
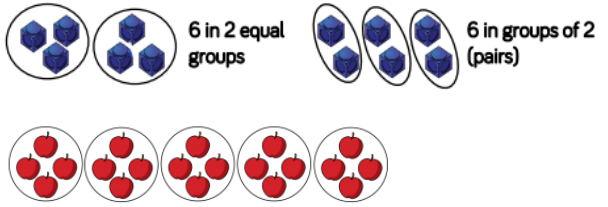


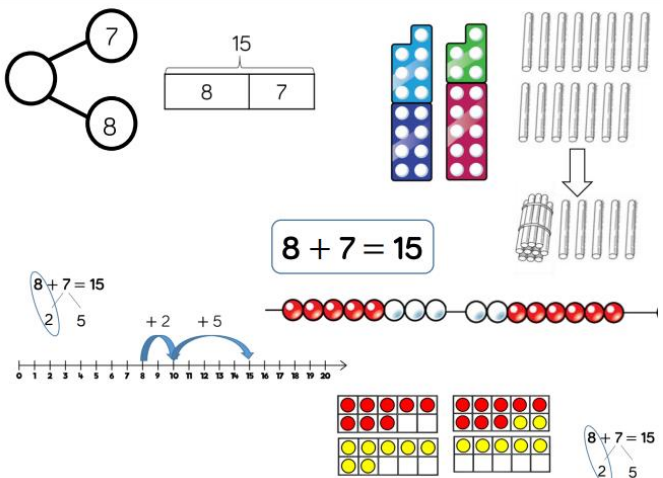
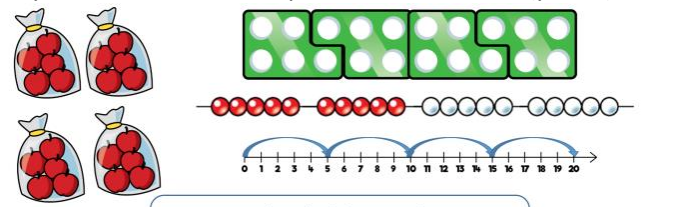
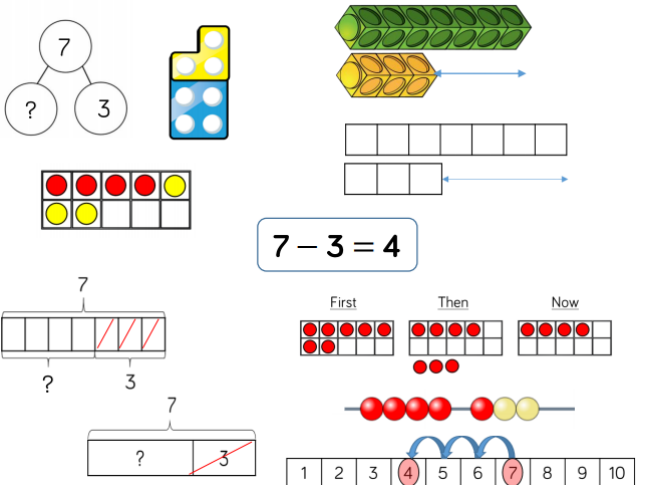
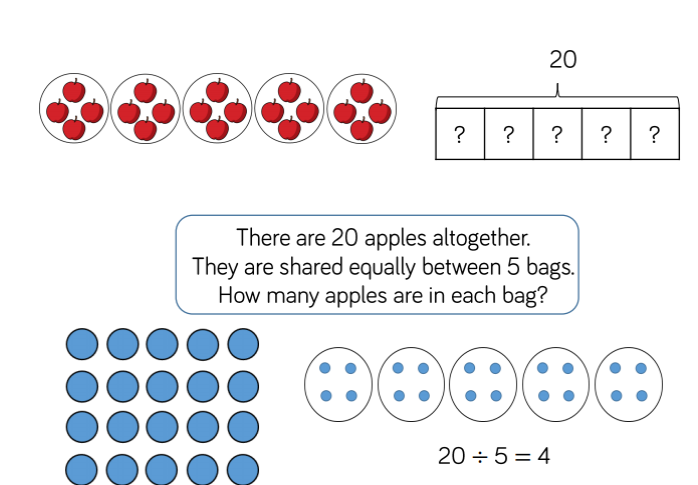
Westmoor Primary School



Calculations Policy

This policy demonstrates the steps, with exemplars, of how we teach addition, subtraction, multiplication and division.

Addition		Multiplication	
<p>Representations</p>  <p>Part-whole Model</p> <p>Number tracks</p> <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20</p>	<p>Key Vocab Number bonds Subitise Whole Part Model Number track add, more, and make, sum, total altogether</p> <p>Video links</p> <p>https://www.bbc.co.uk/ipla/episode/b08dr113/numberblocks-series-1-the-whole-of-me?seriesId=b08bzg8q</p> <p>https://www.bbc.co.uk/ipla/episode/b08phr1g/numberblocks-series-2-ten?seriesId=b0b15v3r</p> <p>https://www.bbc.co.uk/ipla/episode/b0b1sv9r/numberblocks-series-3-fruit-salad?seriesId=b0b1sv7v</p> <p>https://www.bbc.co.uk/ipla/episode/b08q39b4/numberblocks-series-2-just-add-one?seriesId=b0b1sv3r</p> <p>WHAT IS ADDITION</p>	<p>Representations</p> 	<p>Key Vocab Groups of Doubling</p> <p>Video links</p> <p>x2 table</p>
Subtraction		Division	
<p>Representations</p> <p>Number tracks</p> <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20</p> 	<p>Key Vocab Take away, less, difference between</p> <p>Video links</p> <p>https://www.bbc.co.uk/bitesize/topics/zvw39j6/articles/ztprwx</p> <p>https://www.bbc.co.uk/ipla/episode/b08dmjsk/numberblocks-series-1-10-holes?seriesId=b08bzg8q</p>	<p>Representations</p> <p>6 in 2 equal groups</p> <p>6 in groups of 2 (pairs)</p> 	<p>Key Vocab Share Groups of Halving</p> <p>Video links</p> <p>https://www.bbc.co.uk/ipla/episode/b08q4g7y/numberblocks-series-2-counting-sheep?seriesId=b0b15v3r</p>

Addition		Multiplication	
<p>Representations - for explanation click here (p3-18)</p>  <p>$8 + 7 = 15$</p>	<p>Key Vocab Number bonds Part-whole model Bar Model addition, add, more, and make, sum, total altogether, equals</p>	<p>Representations - for explanation click here (p3-12)</p>  <p>One bag holds 5 apples. How many apples do 4 bags hold?</p> <p>$5 + 5 + 5 + 5 = 20$ $4 \times 5 = 20$ $5 \times 4 = 20$</p>	<p>Key Vocab array double, multiplication multiply multiplied by, multiple, doubling halving array number patterns</p>
<p>Video links Add two 1-digit numbers</p> <p>Tens frames Numicon Number line</p>			<p>Video links repeated addition x2 table x5 table x10 table</p>
Subtraction		Division	
<p>Representations - for explanation click here (p3-18)</p>  <p>$7 - 3 = 4$</p>	<p>Key Vocab number bonds take away, less, fewer, difference between, missing number, subtract,</p>	<p>Representations - for explanation click here (p3-12)</p>  <p>There are 20 apples altogether. They are shared equally between 5 bags. How many apples are in each bag?</p> <p>$20 \div 5 = 4$</p>	<p>Key Vocab half, halve division, dividing grouping sharing</p>
<p>Video links Subtract two 1-digit numbers</p>			<p>Video links Division by sharing Groups of</p>

Addition

Representations - for explanation click [here](#) (p3-18)

38
23
?

$38 + 23 = 61$

Tens	Ones

61	
1	

Key Vocab
addition, add, more, and make, sum, total, altogether, more,

Video links
[Addition using place value counters](#)
[Addition using Base Ten](#)
[Addition using partitioning](#)

Multiplication

Representations - for explanation click [here](#) (p3-12)

One bag holds 5 apples.
How many apples do 4 bags hold?

$5 + 5 + 5 + 5 = 20$
 $4 \times 5 = 20$
 $5 \times 4 = 20$

Key Vocab
double, multiplication, multiply, multiplied by, **multiple**, times, times, **repeated addition**, array, division fact

Video links

Subtraction

Representations - for explanation click [here](#) (p3-18)

65
28
65

$65 - 28 = 37$

Tens	Ones

37	

Key Vocab
subtract, take away, left, less, fewer, difference

Video links
[Subtraction on a numberline](#)
[Subtraction using Base Ten](#)
[Subtraction using place value counters](#)

Division

Representations - for explanation click [here](#) (p3-12)

There are 20 apples altogether.
They are put in bags of 5.
How many bags are there?

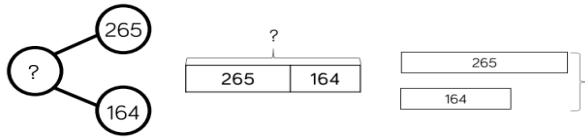
$20 \div 5 = 4$

Key Vocab
half, halve, groups of, division, dividing, divide, divided by, divided into, grouping, sharing, share, share equally, each, halving, **left over**

Video links
COMING SOON!

Addition

Representations - for explanation click [here](#) (p3-18)



$$265 + 164 = 429$$



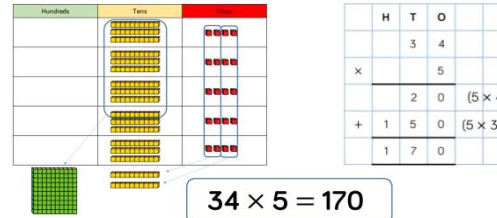
Key Vocab
addition, add, more, and make, sum, total altogether more, hundreds boundary

Video links

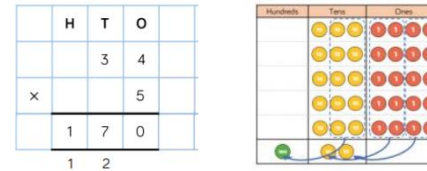
COMING SOON!

Multiplication

Representations - for explanation click [here](#) (p3-12)



$$34 \times 5 = 170$$



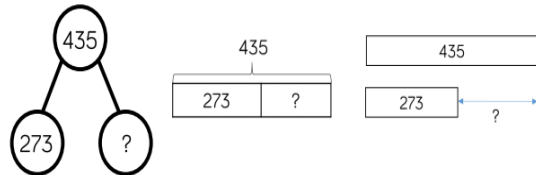
Key Vocab
array, double, multiplication, multiply, multiplied by, multiple, groups of, times, product, repeated addition, multiplication table, multiplication fact, **product**

Video links

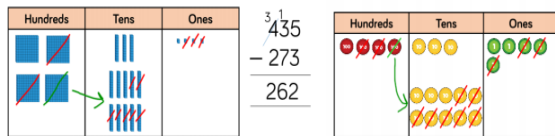
COMING SOON!

Subtraction

Representations - for explanation click [here](#) (p3-18)



$$435 - 273 = 262$$



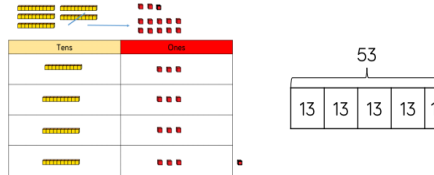
Key Vocab
subtract, take away, left/left over, less, fewer, difference between, missing number, tens boundary, hundreds boundary

Video links

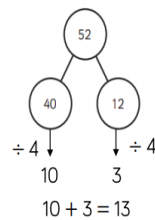
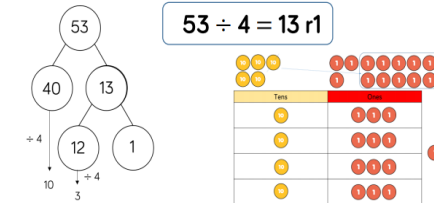
COMING SOON!

Division

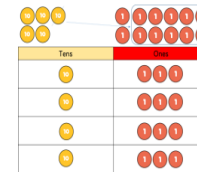
Representations - for explanation click [here](#) (p3-12)



$$53 \div 4 = 13 \text{ r}1$$



$$52 \div 4 = 13$$



Key Vocab
factor, division dividing, divide, divided by, divided into, left, left over, **remainder**, grouping sharing, share, share equally, groups of halving, division fact

Video links

COMING SOON!

Addition

Representations - for explanation click [here](#) (p3-18)

1,378 + 2,148 = 3,526

1	3	7	8				
+	2	1	4	8			
				3	5	2	6
					1	1	

Thousands	Hundreds	Tens	Ones
1	3	7	8
2	1	4	8
3	5	2	6

Key Vocab
addition, add, more, and make, sum, total altogether more, **integer, inverse**

Video links
COMING SOON!

Multiplication

Representations - for explanation click [here](#) (p3-12)

$245 \times 4 = 980$

	H	T	O
	2	4	5
x			4
	9	8	0
	1	2	

Key Vocab
array, double, multiplication, multiply, multiplied by, multiple, groups of, times, product, repeated addition, multiplication table, multiplication fact **integer, inverse, square, squared cube, cubed**

Video links
COMING SOON!

Subtraction

Representations - for explanation click [here](#) (p3-18)

$4,357 - 2,735 = 1,622$

4	3	5	7				
-	2	7	3	5			
				3	1		
				1	6	2	2

Thousands	Hundreds	Tens	Ones
4	3	5	7
2	7	3	5
1	6	2	2

Key Vocab
subtract, take away, left/left over, less, fewer, difference between, missing number, tens boundary, hundreds boundary, **integer inverse**

Video links
COMING SOON!

Division

Representations - for explanation click [here](#) (p3-12)

$844 \div 4 = 211$

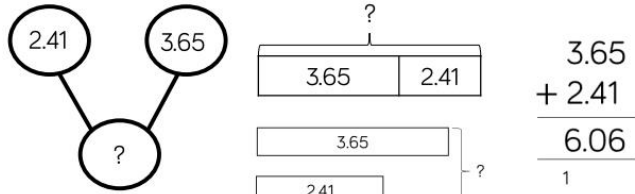
$844 \div 4 = 211$

Key Vocab
factor, division dividing, divide, divided by, divided into, left, left over, remainder, grouping sharing, share, share equally, groups of halving, division fact

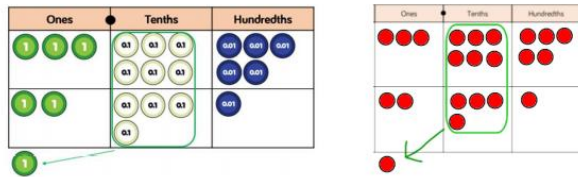
Video links
COMING SOON!

Addition

Representations - for explanation click [here](#) (p3-18)



$3.65 + 2.41 = 6.06$

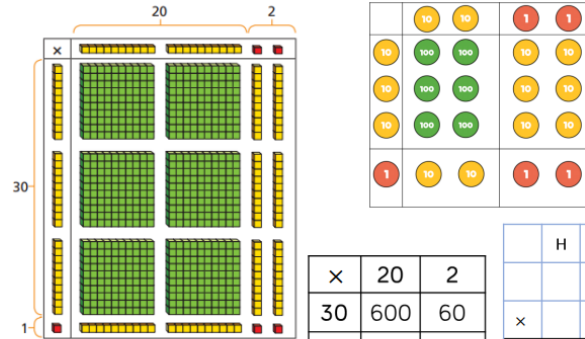


Key Vocab
addition, add, more, and make, sum, total altogether more, integer, inverse

Video links
COMING SOON!

Multiplication

Representations - for explanation click [here](#) (p3-12)



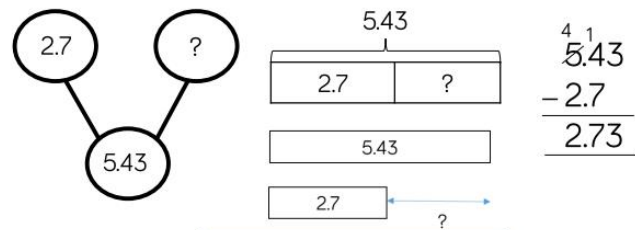
$22 \times 31 = 682$

Key Vocab
array, double, multiplication, multiply, multiplied by, multiple, groups of, times, product, repeated addition, multiplication fact integer, inverse, square, squared cube, cubed

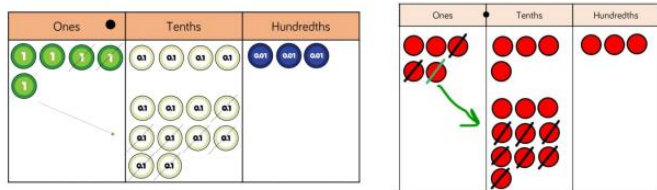
Video links
COMING SOON!

Subtraction

Representations - for explanation click [here](#) (p3-18)



$5.43 - 2.7 = 2.73$

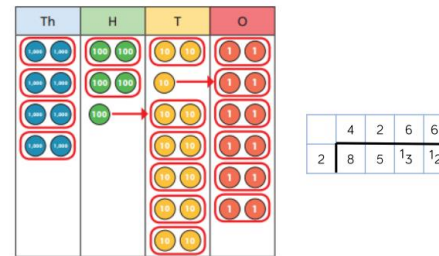


Key Vocab
subtract, take away, left/left over, less, fewer, difference between, missing number, tens boundary, hundreds boundary, integer inverse

Video links
COMING SOON!

Division

Representations - for explanation click [here](#) (p3-12)

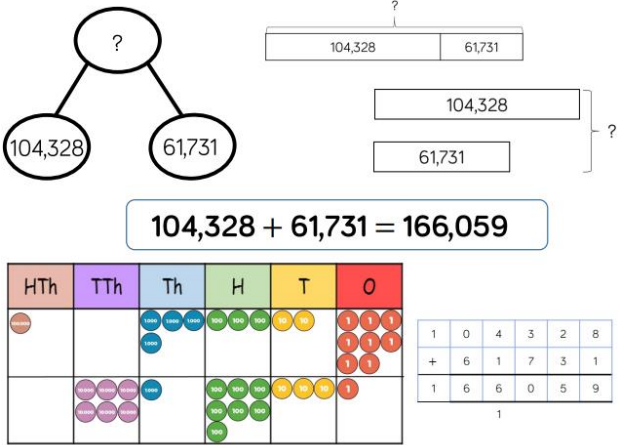
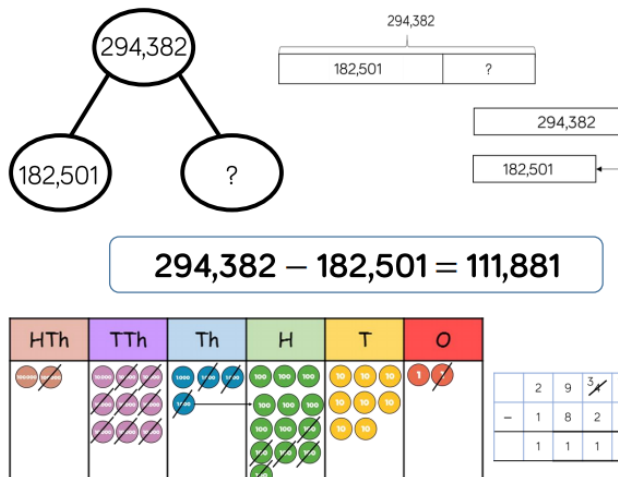


$8,532 \div 2 = 4,266$

$856 \div 4 = 214$

Key Vocab
factor prime

Video links
COMING SOON!

Addition		Multiplication																															
<p>Representations - for explanation click here (p3-18)</p>  <p style="text-align: center;">$104,328 + 61,731 = 166,059$</p>	<p>Key Vocab BODMAS</p>	<p>Representations - for explanation click here (p3-12)</p> <table border="1" style="margin: 0 auto;"> <tr><td>TTh</td><td>Th</td><td>H</td><td>T</td><td>O</td></tr> <tr><td></td><td>2</td><td>7</td><td>3</td><td>9</td></tr> <tr><td>×</td><td></td><td></td><td>2</td><td>8</td></tr> <tr><td>2</td><td>1</td><td>9</td><td>1</td><td>2</td></tr> <tr><td>5</td><td>4</td><td>7</td><td>8</td><td>0</td></tr> <tr><td>7</td><td>6</td><td>6</td><td>9</td><td>2</td></tr> </table> <p style="text-align: center;">$2,739 \times 28 = 76,692$</p>	TTh	Th	H	T	O		2	7	3	9	×			2	8	2	1	9	1	2	5	4	7	8	0	7	6	6	9	2	<p>Key Vocab common multiples BODMAS cubed indices</p>
TTh	Th	H	T	O																													
	2	7	3	9																													
×			2	8																													
2	1	9	1	2																													
5	4	7	8	0																													
7	6	6	9	2																													
<p>Video links</p> <p style="text-align: center;">Column addition with large numbers</p>		<p>Video links COMING SOON!</p>																															
Subtraction		Division																															
<p>Representations - for explanation click here (p3-18)</p>  <p style="text-align: center;">$294,382 - 182,501 = 111,881$</p>	<p>Key Vocab BODMAS</p>	<p>Representations - for explanation click here (p3-12)</p> <table border="1" style="margin: 0 auto;"> <tr><td></td><td></td><td>0</td><td>3</td><td>6</td></tr> <tr><td></td><td>12</td><td>4</td><td>4</td><td>7</td></tr> </table> <p style="text-align: center;">$432 \div 12 = 36$</p> <p style="text-align: center;">$7,335 \div 15 = 489$</p> <table border="1" style="margin: 0 auto;"> <tr><td></td><td></td><td>0</td><td>4</td><td>8</td><td>9</td></tr> <tr><td></td><td>15</td><td>7</td><td>7</td><td>13</td><td>13</td></tr> </table> <p style="text-align: center;">$372 \div 15 = 24 \frac{4}{5}$</p>			0	3	6		12	4	4	7			0	4	8	9		15	7	7	13	13	<p>Key Vocab BODMAS divisor dividend Common factors square root</p>								
		0	3	6																													
	12	4	4	7																													
		0	4	8	9																												
	15	7	7	13	13																												
<p>Video links</p> <p style="text-align: center;">COMING SOON!</p>		<p>Video links</p> <p style="text-align: center;">Long Division</p>																															