



St Lawrence Church of England Primary School

Written Calculations Policy for Addition, Subtraction, Multiplication and Division

On the following pages, you will find examples of written methods we use to teach the four operations.

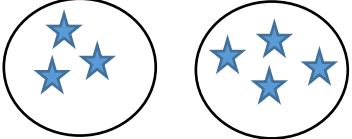


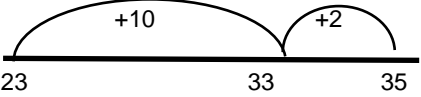
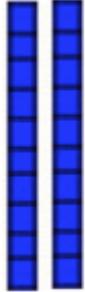
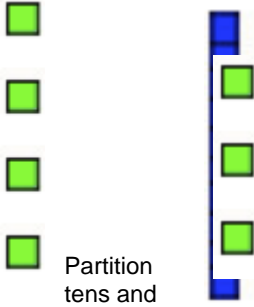
Each list shows a progression of methods used for that calculation. We hope that you find these useful and helpful.

Reviewed 2019

ADDITION

Year	Curriculum Objective/s
EYFS	<ul style="list-style-type: none"> • Using quantities and objects, they add two single-digit numbers and count on to find the answer • Say which number is one more than a given number
1	<ul style="list-style-type: none"> • Add one-digit and two-digit numbers to 20, including zero • Solve one-step problems that involve addition, using concrete objects, pictorial representations and missing number problems • Given a number, identify one more and one less • Represent and use number bonds within 20 • Read, write and interpret mathematical statements involving addition (+) and equals (=) signs
2	<ul style="list-style-type: none"> • Add numbers using concrete objects, pictorial representations, and mentally, including TU+U, TU+T, TU+TU and U+U+U • Show that addition of two numbers can be done in any order • Solve problems with addition, using concrete, pictorial and abstract representations • Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems • Recall and use addition facts to 20 fluently, and derive and use related facts up to 100
3	<ul style="list-style-type: none"> • Add numbers mentally, including HTU+U, HTU+T and HTU+H • Add numbers with up to three digits, using formal written methods of column addition • Estimate the answer to a calculation and use the inverse operations to check answers • Solve problems, including missing number problems, using number facts, place value and more complex addition
4	<ul style="list-style-type: none"> • Add numbers with up to 4 digits using informal written methods of column addition where appropriate • Estimate and use inverse operations to check answers to a calculation • Solve addition two-step problems in contexts, deciding which operations and methods to use and why
5	<ul style="list-style-type: none"> • Add numbers mentally with increasingly large numbers • Add whole numbers with more than 4 digits, using formal written methods • Use rounding to check answers to calculations and determine, in the context of the problem, levels of accuracy • Solve addition multi-step problems in contexts, deciding which operations and methods to use and why
6	<ul style="list-style-type: none"> • Perform mental calculations, including mixed operations and large numbers • Use their knowledge of the order of operations to carry out calculations involving the four operations • Solve addition multi-step problems in contexts, deciding which operations and methods to use and why • Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy

ADDITION

Reception	Year 1	Year 2	Year 3																																																																																																																
<p>Use songs and rhymes that include counting on, such as “1, 2, 3, 4, 5, Once I Caught a Fish Alive”.</p> <p>Add using concrete objects to find the total of two sets.</p> <p>$3 + 4 = 7$</p> <div style="text-align: center;">  </div> <p>Add by using jottings to draw objects then find out how many there are altogether.</p> <p>Add by mentally retaining a number and using fingers to count on.</p> <p>Add numbers together by counting on using a number line.</p>	<p>Add numbers together by counting on using a number line.</p> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <p>Add numbers together by counting on using a 100 square.</p> <p>$24 + 5 =$</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr> <tr><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td></tr> <tr><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td></tr> <tr><td>31</td><td>32</td><td>33</td><td>34</td><td>35</td><td>36</td><td>37</td><td>38</td><td>39</td><td>40</td></tr> <tr><td>41</td><td>42</td><td>43</td><td>44</td><td>45</td><td>46</td><td>47</td><td>48</td><td>49</td><td>50</td></tr> <tr><td>51</td><td>52</td><td>53</td><td>54</td><td>55</td><td>56</td><td>57</td><td>58</td><td>59</td><td>60</td></tr> <tr><td>61</td><td>62</td><td>63</td><td>64</td><td>65</td><td>66</td><td>67</td><td>68</td><td>69</td><td>70</td></tr> <tr><td>71</td><td>72</td><td>73</td><td>74</td><td>75</td><td>76</td><td>77</td><td>78</td><td>79</td><td>80</td></tr> <tr><td>81</td><td>82</td><td>83</td><td>84</td><td>85</td><td>86</td><td>87</td><td>88</td><td>89</td><td>90</td></tr> <tr><td>91</td><td>92</td><td>93</td><td>94</td><td>95</td><td>96</td><td>97</td><td>98</td><td>99</td><td>100</td></tr> </table> <p>Add 10 to a number by moving down one square.</p>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	<p>Add numbers together by counting on using a blank number line, initially jumping in 1's but extending to jumping in 10's and 1's.</p> <p>$23 + 12 = 35$</p> <div style="text-align: center;">  </div> <p>Add numbers using pictorial representations, such as base 10 and 1's.</p> <div style="display: flex; align-items: center; justify-content: center; gap: 20px;"> <div style="text-align: center;"> <p>24</p>  </div> <div style="text-align: center;"> <p>+</p> </div> <div style="text-align: center;"> <p>13</p>  </div> </div> <p style="text-align: center;">into Partition tens and</p> <p>ones and recombine.</p> <p>$13 + 26 =$</p> <p>$10 + 20 = 30$</p> <p>$3 + 6 = 9$</p> <p>$30 + 9 = 39$</p>	<p>Partition into hundreds, tens and ones and recombine.</p> <p>$232 + 124 =$</p> <p>$200 + 100 = 300$</p> <p>$30 + 20 = 50$</p> <p>$2 + 4 = 6$</p> <p>$300 + 50 + 6 = 356$</p> <p>Use expanded column addition to add 3-digit numbers.</p> <p>$135 + 148 =$</p> <div style="margin-left: 20px;"> <table style="border-collapse: collapse;"> <tr><td style="text-align: right;">135</td><td></td></tr> <tr><td style="text-align: right;">+148</td><td></td></tr> <tr><td style="text-align: right;">200 (100+100)</td><td></td></tr> <tr><td style="text-align: right;">70 (30+40)</td><td></td></tr> <tr><td style="text-align: right;">13 (5+8)</td><td></td></tr> <tr><td style="text-align: right; border-top: 1px solid black;">283 (200+70+13)</td><td></td></tr> </table> </div>	135		+148		200 (100+100)		70 (30+40)		13 (5+8)		283 (200+70+13)	
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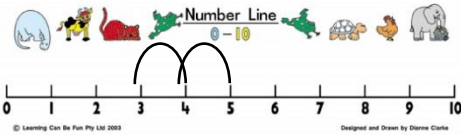
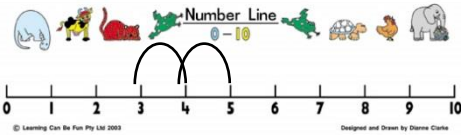
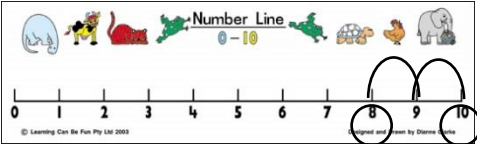
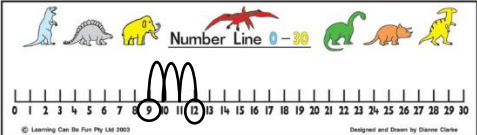
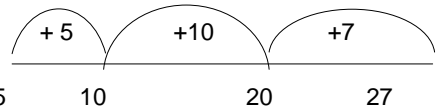
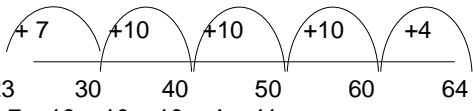
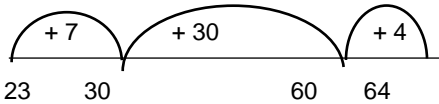
ADDITION

Year 4	Year 5	Year 6
<p>Use expanded column addition to add up to 4-digit numbers.</p> <p>2432 + 1231 =</p> $\begin{array}{r} 2432 \\ +1231 \\ \hline 3000 \text{ (2000+1000)} \\ 600 \text{ (400+200)} \\ 60 \text{ (30+30)} \\ \underline{3} \text{ (2+1)} \\ 3663 \text{ (3000+600+60+3)} \end{array}$	<p>Use shorter column method to add up to 5-digit numbers.</p> $\begin{array}{r} 24326 \\ +12347 \\ \hline 36673 \\ 1 \end{array}$	<p>Use column addition to add whole numbers and decimals.</p> $\begin{array}{r} 1628.9 \\ + 117.25 \\ \hline 1746.15 \\ 11 \end{array}$

SUBTRACTION

Year	Curriculum Objective/s
EYFS	<ul style="list-style-type: none"> • Using quantities and objects, they add two single-digit numbers and count back to find the answer • Say which number is one less than a given number
1	<ul style="list-style-type: none"> • Subtract one-digit and two-digit numbers to 20, including zero • Solve one-step problems that involve subtraction, using concrete objects, pictorial representations and missing number problems • Given a number, identify one more and one less • Represent and use number bonds and related subtraction facts within 20 • Read, write and interpret mathematical statements involving subtraction (-) and equals (=) signs
2	<ul style="list-style-type: none"> • Subtract numbers using concrete objects, pictorial representations, and mentally, including TU-U, TU-T, TU-TU and U-U-U • Show that subtraction of two numbers cannot be done in any order • Solve problems with subtraction, using concrete, pictorial and abstract representations • Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems • Recall and use subtraction facts to 20 fluently, and derive and use related facts up to 100
3	<ul style="list-style-type: none"> • Subtract numbers mentally, including HTU-U, HTU-T and HTU-H • Subtract numbers with up to three digits, using formal written methods of column subtraction • Estimate the answer to a calculation and use the inverse operations to check answers • Solve problems, including missing number problems, using number facts, place value and more complex subtraction
4	<ul style="list-style-type: none"> • Subtract numbers with up to 4 digits using informal written methods of column subtraction where appropriate • Estimate and use inverse operations to check answers to a calculation • Solve subtraction two-step problems in contexts, deciding which operations and methods to use and why
5	<ul style="list-style-type: none"> • Subtract numbers mentally with increasingly large numbers • Subtract whole numbers with more than 4 digits, using formal written methods • Use rounding to check answers to calculations and determine, in the context of the problem, levels of accuracy • Solve subtraction multi-step problems in contexts, deciding which operations and methods to use and why
6	<ul style="list-style-type: none"> • Perform mental calculations, including mixed operations and large numbers • Use their knowledge of the order of operations to carry out calculations involving the four operations • Solve subtraction multi-step problems in contexts, deciding which operations and methods to use and why • Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy

SUBTRACTION

Reception	Year 1	Year 2	Year 3
<p>Use songs and rhymes that include counting back, such as Five Little Speckled Frogs, Five Little Men in a Flying Saucer and Ten Sizzling Sausages.</p> <p>Subtract using concrete objects and taking away.</p> <p>Subtract by using jottings to draw objects and then cross off.</p> <p style="text-align: center;">$5 - 2 =$</p>  <p>Subtract by mentally retaining a number and using fingers to count back Subtract by counting back on a number line $5 - 2 = 3$</p> 	<p>Subtract by finding the difference (counting on) on a printed number line.</p> <p>$10 - 8 =$</p> <p>(start at 8 and count on to 10)</p>  <p>$12 - 9 =$</p> <p>(start at 9 and count on to 12)</p> 	<p>Subtract by finding the difference (counting on) on a blank number line.</p> <p>$27 - 5 = 22$</p>  <p>$5 + 10 + 7 = 22$</p> <p>$64 - 23 = 41$</p>  <p>Extending to grouping tens:</p> <p>$64 - 21 = 41$</p> 	<p>Introduce column method (not exchanging 10)</p> $\begin{array}{r} 64 \\ -23 \\ \hline 41 \end{array}$ <p>Progress to exchanging 10</p> $\begin{array}{r} 34 \\ -16 \\ \hline 29 \end{array}$





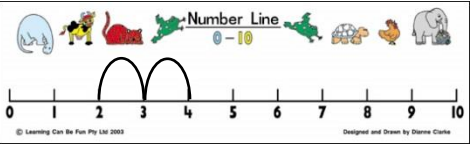
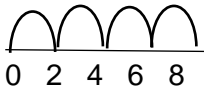
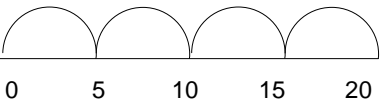
SUBTRACTION

Year 4	Year 5	Year 6
<p data-bbox="114 220 546 244">Subtract numbers using column method.</p> $\begin{array}{r} 23\overset{3}{4}1 \\ -12\overset{2}{2}4 \\ \hline 11\overset{1}{1}7 \end{array}$	<p data-bbox="777 220 1205 244">Subtract numbers using column method.</p> $24346 - 12327 = 12019$ $\begin{array}{r} 243\overset{3}{4}6 \\ -123\overset{2}{2}7 \\ \hline 12019 \end{array}$	<p data-bbox="1435 220 2024 276">Subtract numbers using contracted column method and decomposition.</p> $1628.90 - 117.25 = 1511.65$ $\begin{array}{r} 1628.\overset{8}{9}0 \\ -117.\overset{2}{2}5 \\ \hline 1511.\overset{6}{6}5 \end{array}$

MULTIPLICATION

Year	Curriculum Objective/s
EYFS	<ul style="list-style-type: none"> • They solve problems involving doubling
1	<ul style="list-style-type: none"> • Count in multiples of 2, 5 and 10 • Solve one-step problems that involve multiplication, calculating the answer by using concrete objects, pictorial representations and arrays
2	<ul style="list-style-type: none"> • Count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward • Recall and use multiplication facts for the 2, 5 and 10 times tables, including recognising odd and even numbers • Calculate mathematical statements for multiplication within the multiplication tables and write them using the multiplication (x) and equals (=) signs • Show that multiplication of two numbers can be done in any order • Solve problems involving multiplication, using materials, arrays, repeated addition, mental methods and multiplication facts, including problems in contexts
3	<ul style="list-style-type: none"> • Count from 0 in multiples of 4, 8, 50 and 100 • Recall and use multiplication facts for the 3, 4 and 8 times tables • Write and calculate mathematical statements for multiplication using the multiplication tables that they know, including 2-digit x 1-digit, using mental methods • Progress to formal written calculation methods • Solve problems, including missing number problems, involving multiplication, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects
4	<ul style="list-style-type: none"> • Count in multiples of 6, 7, 9, 25 and 1000 • Recall multiplication facts for multiplication tables up to 12x12 • Use place value, known and derived facts to multiply mentally, including multiplying by 0 and 1 and multiplying together 3 numbers • Recognise and use factor pairs and commutativity in mental calculations • Multiply two-digit and three-digit numbers by a one-digit number using the grid method • Solve problems involving multiplying, including the distributive law to multiply two-digit numbers by one-digit numbers, integer scaling problems and harder correspondence problems such as n objects connected to m objects
5	<ul style="list-style-type: none"> • Recognise and use square numbers and cube numbers and the notation for squared (2) and cubed (3) • Know and use factors, factor pairs, prime numbers and prime factors. • Multiply numbers mentally drawing upon known facts • Multiply whole numbers and those involving decimals by 10, 100 and 1000 • Multiply numbers up to four digits by a one-digit or two-digit number using a formal written method, including long multiplication for two-digit numbers • Solve problems involving multiplication including using their knowledge of multiples, squares and cubes • Solve problems involving multiplication, including the equals sign, scaling simple fractions and involving simple rates
6	<ul style="list-style-type: none"> • Identify common factors, common multiples and prime numbers • Perform mental calculations, including with mixed operations and large numbers • Multiple multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication • Use their knowledge of the order of operations to carry out calculations involving the 4 operations • Solve problems involving multiplication • Use estimation to check answers to calculation and determine, in the context of a problem, an appropriate degree of accuracy

MULTIPLICATION

Reception	Year 1	Year 2	Year 3					
<p>Double numbers using objects in role play and practical contexts.</p> <p>E.g. I have 2 strawberries – what is double 2 strawberries?</p>  <p>Use jottings to find the double of numbers.</p> $4 + 4 =$	<p>Use objects to support multiplication e.g. counting objects sorted into 2's, 5's and 10's.</p>  <p>Calculate answers by using concrete objects.</p> <p>E.g. finding how many hands on 4 compare bears.</p>  <p>Calculate answers by drawing pictures.</p> <p>E.g. finding how many eyes on 3 people</p>  <p>Calculate answers by using arrays.</p> $4 \times 2 = 8$	<p>Continue to use concrete objects and arrays to support multiplication.</p> $4 \times 3 = 12$	<p>Multiply by partitioning numbers.</p> $15 \times 3 = 45$ $10 \times 3 = 30$ $5 \times 3 = 15$ $30 + 15 = 45$					
<p>Use a number line to find doubles by counting on.</p> $2 + 2 =$ 	<p>Solve multiplication problems using repeated addition on a number line.</p> $2 + 2 + 2 + 2 = 8$ $4 \times 2 = 8$ $+2 \quad +2 \quad +2 \quad +2$  $0 \quad 2 \quad 4 \quad 6 \quad 8$ $4 \times 5 =$ $5 + 5 + 5 + 5 =$ $1 \times 5 \quad 2 \times 5 \quad 3 \times 5 \quad 4 \times 5$  $0 \quad 5 \quad 10 \quad 15 \quad 20$	<p>Multiply using the grid method.</p> $15 \times 3 =$ <table style="display: inline-table; border-collapse: collapse; margin-right: 20px;"> <tr> <td style="border-right: 1px solid black; border-bottom: 1px solid black; padding: 5px;">x</td> <td style="border-bottom: 1px solid black; padding: 5px;">10</td> <td style="border-bottom: 1px solid black; padding: 5px;">5</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px;">3</td> <td style="padding: 5px;">30</td> <td style="padding: 5px;">15</td> </tr> </table> <p style="text-align: right;">= 45</p>	x	10	5	3	30	15
x	10	5						
3	30	15						

MULTIPLICATION

Year 4	Year 5	Year 6
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Multiply numbers using the grid method.

15 x 7 =

x	10	5	
7	70	35	= 105

Confidently multiply by multiples of 10.

- If 7 x 5 = 35
 Then 7 x 50 = 350
 70 x 5 = 350
 7 x 500 = 2500
 135 x 6 = 810

X	100	30	5
6	600	180	30

600 + 180 + 30 = 810

372 x 24 = 8928

x	300	70	2
20	6000	1400	40
4	1200	280	8

7440 + 1488 = 8928

Multiply whole numbers by 10, 100 and 1000 using place value grids.

25 x 100

Th	H	T	U	.	1/10	1/100
		2	5	.		
2	5	0	0	.		

Multiply numbers using the column method including short and long multiplication.

$$\begin{array}{r} 1632 \\ \times 7 \\ \hline 11424 \\ \hline 11424 \\ \hline 11424 \end{array}$$

$$\begin{array}{r} 1632 \\ \times 87 \\ \hline 11424 \\ 130560 \\ \hline 141984 \end{array}$$

$$\begin{array}{r} 130560 \\ \times 67 \\ \hline 783360 \\ 7833600 \\ \hline 8723520 \end{array}$$

Multiply numbers using the column method including short and long multiplication. Include multiplication with decimals

$$\begin{array}{r} 1632 \\ \times 7 \\ \hline 11424 \\ \hline 11424 \\ \hline 11424 \end{array}$$

$$\begin{array}{r} 1632 \\ \times 87 \\ \hline 11424 \\ 130560 \\ \hline 141984 \end{array}$$

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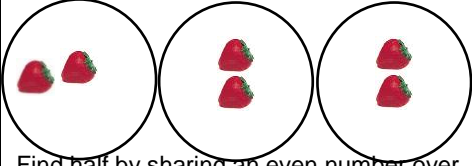
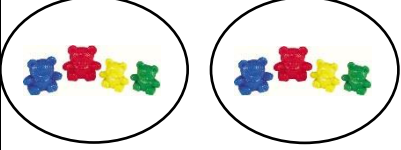
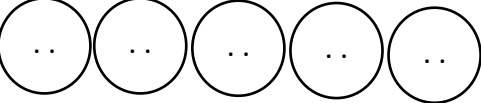

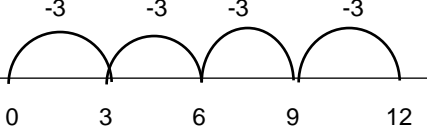
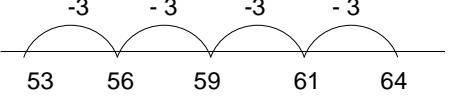
$$\begin{array}{r} 3.26 \\ \times 3 \\ \hline 9.78 \\ \hline \end{array}$$

DIVISION

Year	Curriculum Objective/s
EYFS	<ul style="list-style-type: none"> They solve problems involving halving and sharing

1	<ul style="list-style-type: none"> • Solve one-step problems that involve division, calculating the answer by using concrete objects, pictorial representations and arrays
2	<ul style="list-style-type: none"> • Recall and use division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers • Calculate mathematical statements for division within the multiplication tables and write them using the division (\div) and equals (=) signs • Show that division of one number by another cannot be done in any order • Solve problems involving division, using materials, mental methods and division facts, including problems in contexts
3	<ul style="list-style-type: none"> • Recall and use division facts for the 3, 4 and 8 times tables • Write and calculate mathematical statements for division using the multiplication tables that they know, using mental methods • Progress to formal written calculation methods • Solve problems, including missing number problems, involving division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects • Recognise that tenths arise from dividing an object into 10 equal parts and dividing one-digit numbers or quantities by 10
4	<ul style="list-style-type: none"> • Recall division facts for multiplication tables up to 12×12 • Use place value, known and derived facts to divide mentally, including dividing by 1 • Recognise that hundredths arise from dividing an object by 100 and dividing tenths by ten
5	<ul style="list-style-type: none"> • Divide numbers mentally drawing upon known facts • Divide whole numbers and those involving decimals by 10, 100 and 1000 • Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context • Solve problems involving division including using their knowledge of multiples, squares and cubes • Solve problems involving division, including the equals sign, scaling simple fractions and involving simple rates
6	<ul style="list-style-type: none"> • Perform mental calculations, including with mixed operations and large numbers • Divide numbers up to 4 digits by a 2-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 • Divide numbers up to 4 digits by a 2-digit number using the formal written method of short division where appropriate, interpreting remainders according to context • Use their knowledge of the order of operations to carry out calculations involving the 4 operations • Solve problems involving division • Use estimation to check answers to calculation and determine, in the context of a problem, an appropriate degree of accuracy

DIVISION

Reception	Year 1	Year 2	Year 3										
<p>Share physical objects into groups and say how many are in each group.</p>  <p>Find half by sharing an even number over objects into two groups.</p> 	<p>Understand division as sharing. Solve problems that involve sharing into groups of 2, 5 or 10 using physical objects and pictorial representations.</p>  <p>Understand division as grouping. Solve problems that involve grouping objects into 2's, 5's and 10's using physical objects and pictorial representations.</p> <p>E.g. there are 6 sweets. How many people can have 2 each?</p>	<p>Understand division as grouping. Use bead strings to introduce the idea of taking groups away.</p>  <p>Divide as repeated subtraction on a number line (without remainders).</p> $12 \div 3 = 4$ 	<p>Understand division as grouping</p> $64 \div 3 = 21 \text{ r}1$ <p>Divide as repeated subtraction, counting back on a number line.</p> $64 \div 3 = 21 \text{ r}1$  <p>Divide using the chunking method.</p> $64 \div 3 = 21 \text{ r}1$ <div style="display: flex; align-items: flex-start;"> <div style="flex: 1;"> $\begin{array}{r} 3 \overline{) 64} \\ \underline{- 30} \text{ (10 groups of 3)} \\ 34 \\ \underline{- 30} \text{ (10 groups of 3)} \\ 4 \\ \underline{- 3} \text{ (1 group of 3)} \\ 1 \longleftarrow \text{ remainder 1} \end{array}$ </div> <div style="flex: 1; border: 1px solid black; padding: 5px; margin-left: 10px;"> <p>Knowing tables is vital here. For some pupils, writing the table down saves time when dividing in an I KNOW box:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td>1x3=3</td> <td>6x3=18</td> </tr> <tr> <td>2x3=6</td> <td>7x3=21</td> </tr> <tr> <td>3x3=9</td> <td>8x3=24</td> </tr> <tr> <td>4x3=12</td> <td>9x3=27</td> </tr> <tr> <td>5x3=15</td> <td>10x3=30</td> </tr> </tbody> </table> </div> </div> <p>10+10+1=21</p>	1x3=3	6x3=18	2x3=6	7x3=21	3x3=9	8x3=24	4x3=12	9x3=27	5x3=15	10x3=30
1x3=3	6x3=18												
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DIVISION

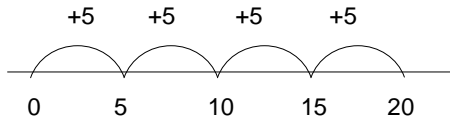
Year 4

Understand division as grouping

$$106 \div 5 = 21 \text{ r}1$$

Divide using repeated addition; counting forwards on a number line e.g.

$$106 \div 5 = 21 \text{ r}1$$



Division using known facts

$$165 \div 5 = 33$$

$$150 = 30 \times 5$$

Then count:
 $155 = 31 \times 5$
 $160 = 32 \times 5$
 $165 = 33 \times 5$

OR
 Then 15 more is 3×5 .
 So 30×5 and $3 \times 5 = 33 \times 5$

I know:	
$1 \times 5 = 5$	$6 - 30$
$2 - 10$	$7 - 35$
$3 - 15$	$8 - 40$
$4 - 20$	$9 - 45$
$5 - 25$	$10 - 50$
From here, pupils can work out 20, 30, 40... lots of 5 and use this to make shortcuts.	

Year 5

Division as chunking

$$259 \div 6 = 43 \text{ r}1$$

$$\begin{array}{r} 6 \overline{) 259} \\ -240 \quad (40 \text{ groups of } 6) \end{array}$$

$$\begin{array}{r} = 19 \\ - 18 \quad (3 \text{ groups of } 6) \end{array}$$

$$= 1$$

For many pupils, the addition of an 'I Know' box makes the calculation easy.

For $259 \div 6$ there are a couple of ways of doing the 'I know' box.

I Know
$6 \times 10 = 60$
$6 \times 20 = 120$
$6 \times 30 = 180$
$6 \times 40 = 240$
$6 \times 50 = 300$ too many
so I will use 6×40

I Know
$6 \times 2 = 12$
$6 \times 5 = 30$
$6 \times 10 = 60$
$6 \times 20 = 120$
$6 \times 50 = 300$ too many

Year 6

Divide using short division

$$\begin{array}{r} 496 \\ 12 \overline{) 591572} \end{array}$$

I know:	
12	72
24	84
36	96
48	108
60	120

Divide using long division

$$\begin{array}{r} 37 \\ 28 \overline{) 1036} \\ - 840 \quad (30 \times 28) \\ \hline 196 \\ - 196 \quad (7 \times 28) \\ \hline 0 \end{array}$$

I know:	
28	168
56	196
84	224
112	252
140	280