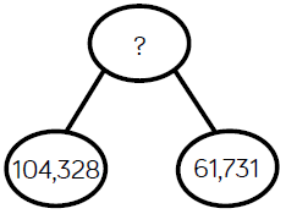
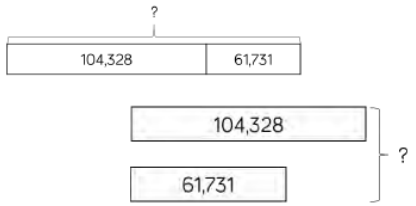
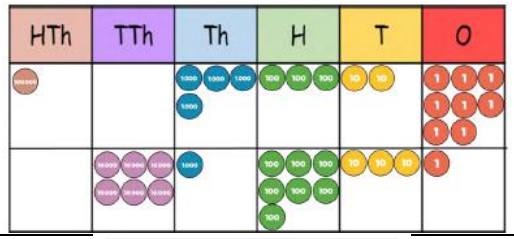
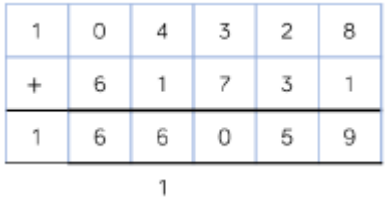
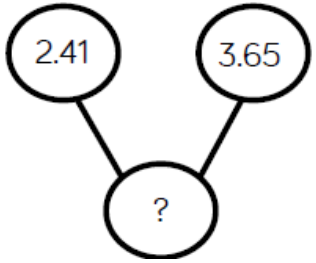
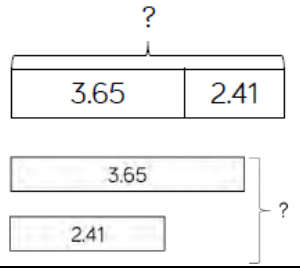
SARUM HALL
SCHOOL

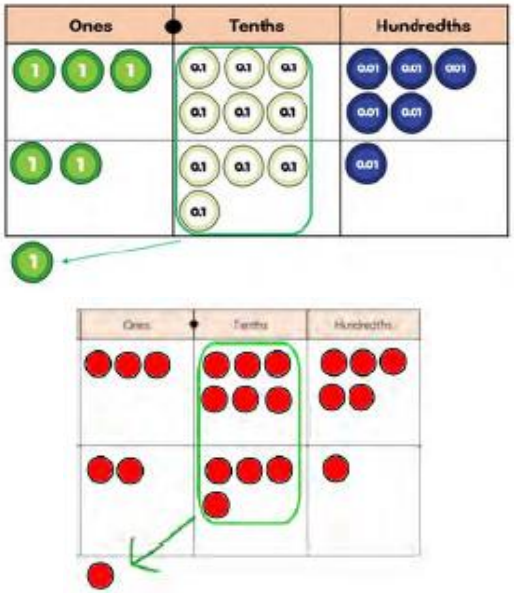
MATHS CALCULATION POLICY (Year 5 & 6)

Date:	July 2025
Next Review Due:	September 2026
Reviewed by:	Chen Lee

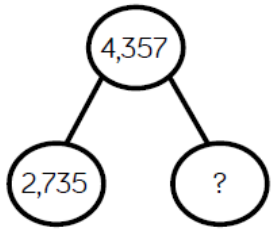
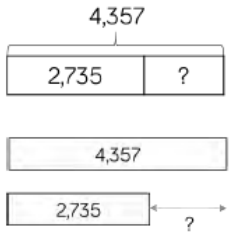
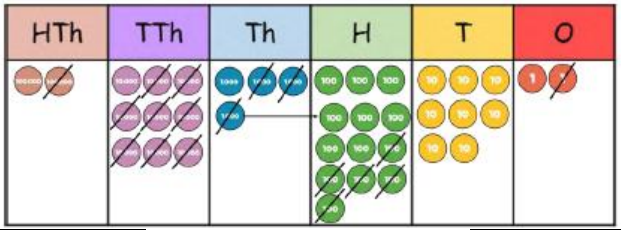
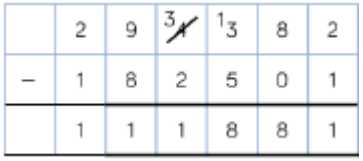
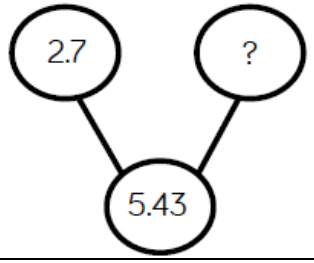
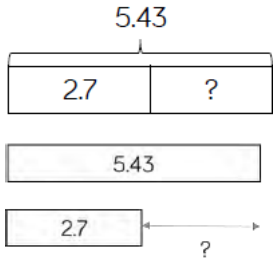
This policy has been largely adapted from the White Rose Maths Calculation Policy with further material added.
It is a working document and will be revised and amended as necessary.

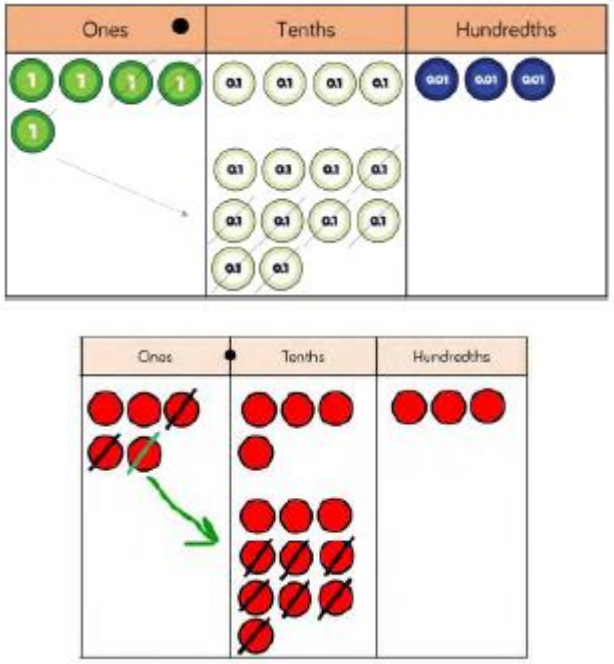
ADDITION

<table>
<tr><th>Skill</th><th>Representations and Models</th><th>Vocabulary</th></tr>
<tr><td rowspan="3">Add numbers with more than 4 digits</td><td colspan="2">Example: 104,328 + 61,731 = 166,059</td><td rowspan="3">• Multiples
• Partitioning
• Hundreds/Thousands/ Ten thousands/one hundred thousand
• Numbers to ten million
• Negative numbers / integers
• Decimal / point
• Round
• Place value
• Compare
• 1000 more
• Count in steps
• Count in multiples
• Estimate
• Addition/add
• Equals
• Facts
• Missing number
• Number bonds
• 2/3/4-digit number
• Commutative
• Column addition
• Order of operations</td></tr>
<tr><td>Part-whole model
 
</td><td>Bar Model
 
</td></tr>
<tr><td>Place value counters
 
</td><td>Column addition
 
</td></tr>
<tr><td rowspan="2">Add with up to 3 decimal places</td><td colspan="2">Example: 3.65 + 2.41 = 6.06</td></tr>
<tr><td>Part-whole model
 
</td><td>Bar Model
 
</td></tr>
</table>

	Place value counters 	**Column addition** 3.65 + 2.41 6.06 1	

SUBTRACTION

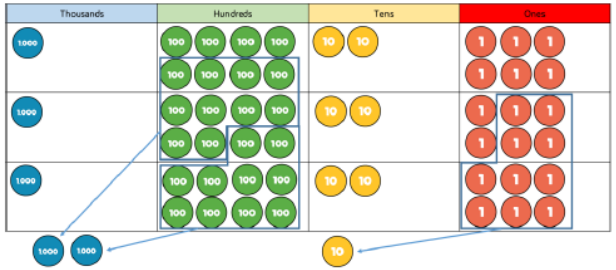
Skill	Representations and Models		Vocabulary
Subtract numbers with more than 4 digits	**Example:** 294,382 – 182,501 = 111,881		• Multiples • Partitioning • Hundreds/Thousands/ Ten thousands/one hundred thousand • Numbers to ten million • Negative numbers / integers • Decimal / point • Round • Place value • Compare • 1000 less • Count in steps • Count in multiples • Estimate • Subtraction/subtract • Take away • Equals • Facts • Missing number • Number bonds • 2/3/4-digit number • Column subtraction • Exchange
	Part-whole model 	**Bar Model** 	
	Place value counters 	**Column subtraction** 	
Subtract with up to 3 decimal places	**Example:** 5.43 – 2.7 = 2.73		
	Part-whole model 	**Bar Model** 	

	Place value counters 	**Column subtraction** $\begin{array}{r} {}^{4}\not{5}.{}^{1}43 \\ -\ 2.7 \\ \hline 2.73 \end{array}$	• Order of operations

MULTIPLICATION

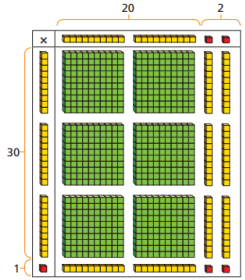
<table>
<tr><th>Skill</th><th>Representations and Models</th><th>Vocabulary</th></tr>
<tr><td>Multiply 4-digit numbers by 1-digit numbers</td><td>
Example: 1,826 × 3 = 5,478

Place value counters

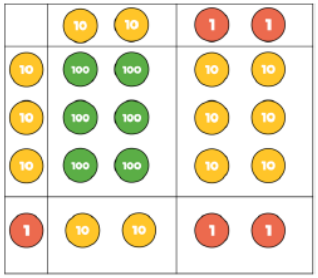
 

Short written method
<table>
<tr><td></td><td>Th</td><td>H</td><td>T</td><td>O</td></tr>
<tr><td></td><td>1</td><td>8</td><td>2</td><td>6</td></tr>
<tr><td>×</td><td></td><td></td><td></td><td>3</td></tr>
<tr><td></td><td>5</td><td>4</td><td>7</td><td>8</td></tr>
<tr><td></td><td>2</td><td></td><td>1</td><td></td></tr>
</table>
</td><td rowspan="2">
• Partitioning
• Hundreds/Thousands/ Ten thousands/one hundred thousand
• Numbers to ten million
• Negative numbers / integers
• Decimal / point
• Round
• Place value
• Estimate
• Multiplication
• Multiply
• Arrays
• Times
• Common factors
• Common multiples
• Product
• 2/3/4-digit number
• Prime numbers
• Square numbers
• Cube numbers
</td></tr>
<tr><td>Multiply 2-digit numbers by 2-digit numbers</td><td>
Example: 22 × 31 = 682

Base 10

Place value counters

 
</td></tr>
</table>

Grid method

×	20	2
30	600	60
1	20	2

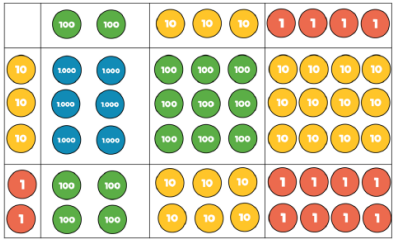
Short written method

	H	T	O
		2	2
×		3	1
		2	2
	6	6	0
	6	8	2

Multiply 3-digit numbers by 2-digit numbers

Example: $234 \times 32 = 7{,}488$

Place value counters



Grid method

×	200	30	4
30	6,000	900	120
2	400	60	8

Short written method

Th	H	T	O
	2	3	4
×		3	2
	4	6	8
$^{1}7$	$^{1}0$	2	0
7	4	8	8

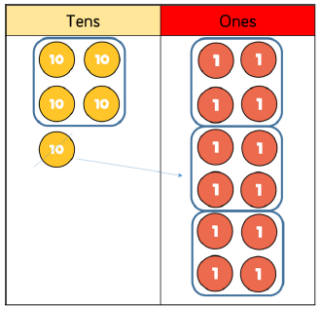
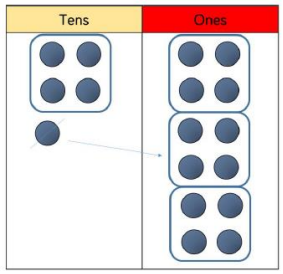
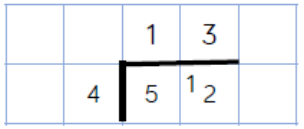
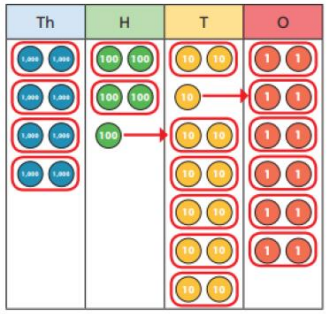
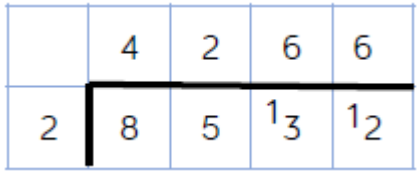
Multiply 4-digit numbers by 2-digit numbers

Example: $2{,}739 \times 28 = 76{,}692$

Short written method

TTh	Th	H	T	O
	2	7	3	9
×			2	8
$^{2}2$	$^{1}5$	$^{3}9$	$^{7}1$	2
$^{1}5$	4	$^{1}7$	8	0
7	6	6	9	2
		^{1}		

DIVISION

Skill	Representations and Models	Vocabulary
Divide 3-digits by 1-digit (grouping)	**Example:** $52 \div 4 = 13$ **Place value counters**  **Place value grid**  **Written short division** 	• Partitioning • Hundreds/Thousands/ Ten thousands/one hundred thousand • Numbers to ten million • Negative numbers / integers • Decimal / point • Round • Place value • Estimate • Division / Divide • Share • Exchange • Remainders • Common factors • Common multiples • Inverse • 2/3/4-digit number • Prime numbers • Square numbers • Cube numbers • Short/long division • Dividend
Divide 4-digits by 1-digit (grouping)	**Example:** $8{,}532 \div 2 = 4{,}266$ **Place value counters**  **Written short division** 	

<table>
<tr>
<td rowspan="2">Divide multi-digits by 2-digits (short division)</td>
<td>Example: 432 ÷ 12 = 36</td>
<td>Example: 7,335 ÷ 15 = 489</td>
<td rowspan="2">• Divisor Quotient</td>
</tr>
<tr>
<td>
<table>
<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
3</td><td>7
2</td></tr>
</table>
</td>
<td>
<table>
<tr><td></td><td>0</td><td>4</td><td>8</td><td>9</td></tr>
<tr><td>15</td><td>7</td><td>7
3</td><td>13
3</td><td>13
5</td></tr>
</table>
</td>
</tr>
<tr>
<td>Divide multi-digits by 2-digits (long division)</td>
<td>Example: 432 ÷ 12 = 36
<table>
<tr><td></td><td></td><td>0</td><td>3</td><td>6</td></tr>
<tr><td>1</td><td>2</td><td>4</td><td>3</td><td>2</td></tr>
<tr><td></td><td>–</td><td>3</td><td>6</td><td>0</td></tr>
<tr><td></td><td></td><td></td><td>7</td><td>2</td></tr>
<tr><td></td><td>–</td><td></td><td>7</td><td>2</td></tr>
<tr><td></td><td></td><td></td><td></td><td>0</td></tr>
</table>
(×30)
(×6)
12 × 1 = 12
12 × 2 = 24
12 × 3 = 36
12 × 4 = 48
12 × 5 = 60
12 × 6 = 72
12 × 7 = 84
12 × 8 = 96
12 × 7 = 108
12 × 10 = 120
</td>
<td>Example: 7,335 ÷ 15 = 489
<table>
<tr><td></td><td>0</td><td>4</td><td>8</td><td>9</td></tr>
<tr><td>15</td><td>7</td><td>3</td><td>3</td><td>5</td></tr>
<tr><td>–</td><td>6</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td></td><td>1</td><td>3</td><td>3</td><td>5</td></tr>
<tr><td>–</td><td>1</td><td>2</td><td>0</td><td>0</td></tr>
<tr><td></td><td></td><td>1</td><td>3</td><td>5</td></tr>
<tr><td>–</td><td></td><td>1</td><td>3</td><td>5</td></tr>
<tr><td></td><td></td><td></td><td></td><td>0</td></tr>
</table>
(×400
(×80)
(×9)
1 × 15 = 15
2 × 15 = 30
3 × 15 = 45
4 × 15 = 60
5 × 15 = 75
10 × 15 = 150
</td>
</tr>
</table>