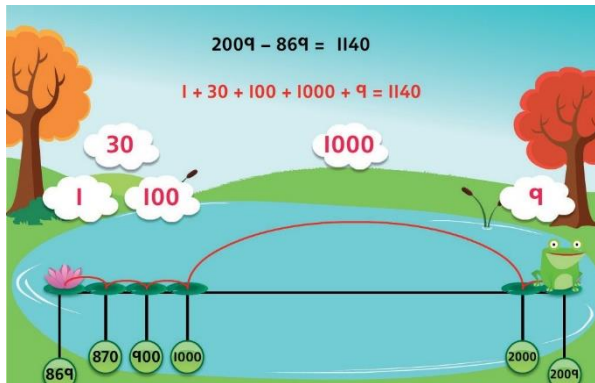|		Year 5	
Addition	**Compact column addition** *Compact column addition to add pairs of 5-digit numbers, towers of several larger numbers and decimal numbers with up to 2 decimal places*	$$\begin{array}{r} 15 \cdot 68 \\ + \quad 27 \cdot 86 \\ 11 \cdot 1 \\ \hline 43 \cdot 54 \end{array}$$	
	Fractions *Add related fractions*	$$\frac{3}{4} + \frac{1}{8} =$$ $$\times 2$$ $$\frac{6}{8} + \frac{1}{8} = \frac{7}{8}$$	
Subtraction	**Counting up** *Find a difference between two numbers by counting up from the smaller to the larger*		
	Compact column subtraction *Compact column subtraction for numbers with up to 5 digits*	$$\begin{array}{r} 0 \;\; \cancel{15} \;\; \cancel{13} \;\; \cancel{1} \;\; \cancel{14} \\ \cancel{1} \;\; \cancel{6} \;\; \cancel{3} \;\; \cancel{2} \;\; \cancel{4} \\ - \quad 8 \;\; 5 \;\; 1 \;\; 6 \\ \hline 7 \;\; 8 \;\; 0 \;\; 8 \end{array}$$	
	Fractions *Subtract related fractions*	$$\frac{3}{4} - \frac{1}{8} =$$ $$\times 2$$ $$\frac{6}{8} - \frac{1}{8} = \frac{5}{8}$$	

Multiplication

Ladder method
Use ladder method to multiply 3-digit and 4-digit numbers by 1-digit numbers

$$
\begin{array}{r}
2\ 5\ 3 \\
\times \quad\quad 6 \\
\hline
1\ 2\ 0\ 0 \leftarrow 6 \times 200 \\
3\ 0\ 0 \leftarrow 6 \times 50 \\
+ \quad\quad 1\ 8 \leftarrow 6 \times 3 \\
\hline
1\ 5\ 1\ 8
\end{array}
$$

Short multiplication
Short multiplication of 2-, 3- and 4-digit numbers by 1-digit numbers (tens digits written small for carrying)

	4	3	5	
×			8	
3	4	²8	⁴0	

Long multiplication
Long multiplication of 2-, 3- and 4-digit numbers by 'teen' numbers (multiplied by ones digit first – as short multiplication)

			4	8
		×	1	6
	2	8	⁴8	
+	4	8	0	
	1			
	7	6	8	

Fractions
Multiply fractions by 1-digit numbers
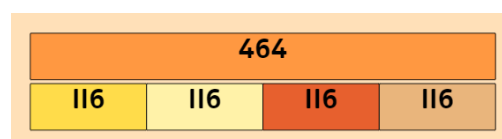
$$\frac{3}{4} \times 6 = \frac{18}{4}$$

Division

Short division

Short division of 3- and 4-digit numbers by 1-digit numbers, giving remainders as whole numbers or as fractions
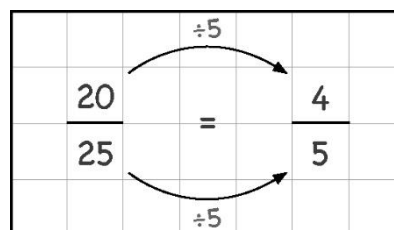
	1	2	8
3	3	8	²4

Fractions

Use bar modelling and written methods of division and multiplication to find unit and non-unit fractions of large amounts

464			
116	116	116	116

$\frac{1}{4}$ *of 464 = 116* $\frac{3}{4}$ *of 464 = 348*

Find equivalent fractions and simplify fractions to their simplest form

$$\frac{20}{25} \xrightarrow{\div 5} = \xrightarrow{\div 5} \frac{4}{5}$$

Turn improper fractions into mixed numbers and vice versa

$$\frac{7}{3} = 2\frac{1}{3}$$