



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

$$\begin{array}{r} 15.68 \\ + 27.86 \\ \hline 11.1 \\ \hline 43.54 \end{array}$$

**Fractions**

Add related fractions

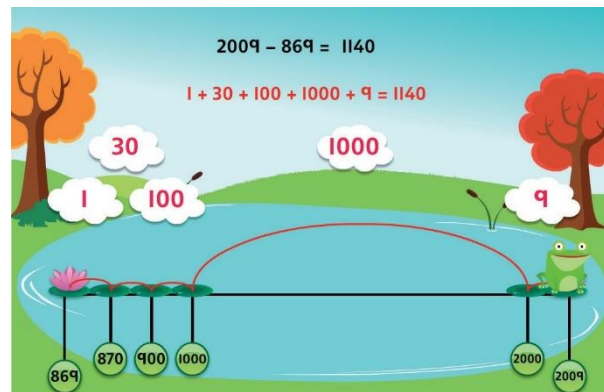
		$\frac{3}{4}$	+	$\frac{1}{8}$	=		
		$\frac{6}{8}$	+	$\frac{1}{8}$	=	$\frac{7}{8}$	

x2

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

$$\begin{array}{r} 01513114 \\ \cancel{0} \cancel{1} \cancel{5} \cancel{1} \cancel{3} \cancel{1} \cancel{1} \cancel{4} \\ - \quad 8516 \\ \hline 7808 \end{array}$$

**Fractions**

Subtract related fractions

		$\frac{3}{4}$	-	$\frac{1}{8}$	=		
		$\frac{6}{8}$	-	$\frac{1}{8}$	=	$\frac{5}{8}$	

x2



**Ladder method**

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

$$\begin{array}{r}
 253 \\
 \times \quad 6 \\
 \hline
 1200 \leftarrow 6 \times 200 \\
 300 \leftarrow 6 \times 50 \\
 + \quad 18 \leftarrow 6 \times 3 \\
 \hline
 1518
 \end{array}$$

**Short multiplication**

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

	4	3	5	
x			8	
3	4	<sup>2</sup> 8	<sup>4</sup> 0	

**Long multiplication**

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

		4	8	
		x	1	6
		2	8	<sup>4</sup> 8
	+	4	8	0
		1		
		7	6	8

**Fractions**

Multiply fractions by 1-digit numbers

$\frac{3}{4}$	x	6	=	$\frac{18}{4}$
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**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	2	4

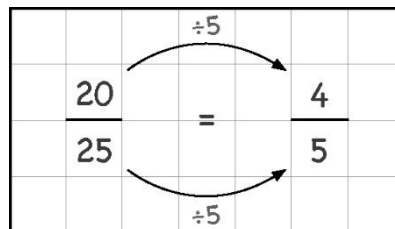
**Fractions**

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

$$\frac{1}{4} \text{ of } 464 = 116$$

$$\frac{3}{4} \text{ of } 464 = 348$$

Find equivalent fractions and simplify fractions to their simplest form



Turn improper fractions into mixed numbers and vice versa

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