

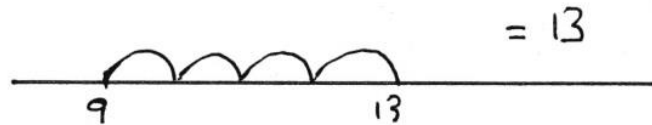
Calculation at Somers Park

Most recent update: October 2015

Addition

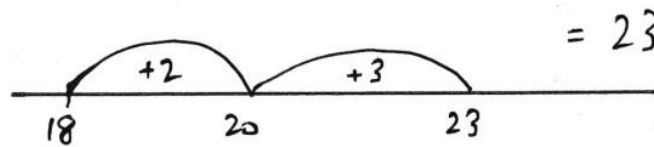
In Key Stage 1: start with the biggest number and count on

$$9 + 4$$

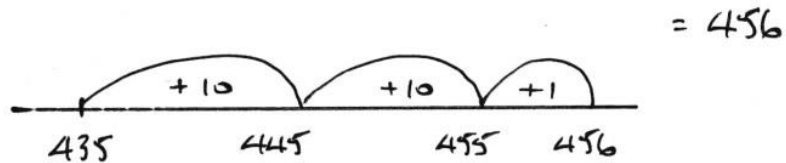


Use a number line

$$18 + 5$$



$$435 + 21$$



Introduced in Key Stage 2: partitioning and recombination

$$\begin{array}{r} 56 + 27 \\ \hline 70 + 13 = 83 \end{array}$$

Column addition

$$\begin{array}{r} 684 \\ + 172 \\ \hline 856 \\ \hline 1 \end{array}$$

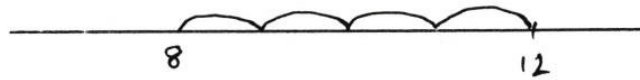
$$\begin{array}{r} 29.27 \\ + 4.30 \\ \hline 33.57 \\ \hline 1 \end{array}$$

$$\begin{array}{r} 4596 \\ 9146 \\ \hline 13742 \\ \hline 1 \quad 1 \quad 1 \end{array}$$

Subtraction

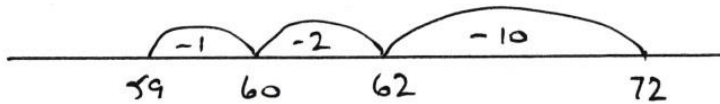
In Key Stage 1: start with the largest number and count back

$$12 - 4 = 8$$



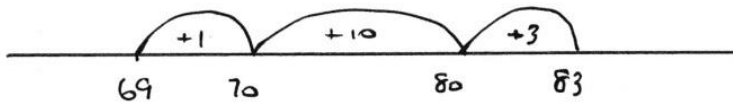
Use a number line to take away

$$72 - 13 = 59$$



Use a number line to find the difference

$$83 - 69 = 14$$



Introduced in Key Stage 2: column subtraction

$$\begin{array}{r} 89 \\ - 14 \\ \hline 75 \end{array}$$

$$\begin{array}{r} 563 \\ - 15 \\ \hline 48 \end{array}$$

$$\begin{array}{r} 5627 \\ - 283 \\ \hline 344 \end{array}$$

$$\begin{array}{r} 236.30 \\ - 18.28 \\ \hline 18.02 \end{array}$$

$$\begin{array}{r} 12604 \\ - 9156 \\ \hline 3448 \end{array}$$

Multiplication

Multiplication tables – 2x, 5x, 10x and then all others up to 10 x 10, and then up to 10 x 12

Multiplication grid

$$28 \times 49$$

	20	8	
40	800	320	800
9	180	72	320
			180
			72
			<u>1372</u>

Column multiplication

$$\begin{array}{r} 46 \\ \times 7 \\ \hline 322 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 247 \\ \times 6 \\ \hline 1482 \\ \hline 24 \end{array}$$

$$\begin{array}{r} 297 \\ \times 84 \\ \hline 1188 \\ 23760 \\ \hline 24948 \\ \hline \end{array}$$

$$1.43 \times 3.4$$

(estimate: $1.5 \times 3 = 4.5$)*

$$\begin{array}{r} 143 \\ \times 34 \\ \hline 572 \\ 4290 \\ \hline \end{array}$$

4862 *so answer is 4.862

Division

Using multiplication tables: "how many" question

e.g. $24 \div 3$ ("how many 3s in 24") = 8

Division by chunking

$$371 \div 7$$

$$\begin{array}{r} 7 \overline{) 371} \\ - 350 \quad (50 \times 7) \\ \hline 21 \\ - 21 \quad (3 \times 7) \\ \hline 0 \\ \hline \hline = 53 \end{array}$$

$$9423 \div 27$$

$$\begin{array}{r} 27 \overline{) 9423} \\ - 5400 \quad (200 \times 27) \\ \hline 4023 \\ - 2700 \quad (100 \times 27) \\ \hline 1323 \\ - 540 \quad (20 \times 27) \\ \hline 783 \\ - 540 \quad (20 \times 27) \\ \hline 243 \\ - 243 \quad (9 \times 27) \\ \hline 0 \\ \hline \hline = 349 \end{array}$$

$$880.2 \div 27$$

(estimate:
 $900 \div 30 = 30$)^{*}

$$\begin{array}{r} 27 \overline{) 880.2} \\ - 8100 \quad (300 \times 27) \\ \hline 702 \\ - 540 \quad (20 \times 27) \\ \hline 162 \\ - 135 \quad (5 \times 27) \\ \hline 27 \\ - 27 \quad (1 \times 27) \\ \hline 0 \\ \hline \hline = 32.6 \end{array}$$

Short division

$$\begin{array}{r} 1891 \\ 3 \overline{) 5673} \end{array}$$

$$4 \overline{) 527^3} = 131 \frac{3}{4}$$

* So answer is 32.6

Doubling

$$\begin{array}{r} \text{Double } 463 \\ \diagdown \quad | \quad \diagup \\ 800 + 120 + 6 = 926 \end{array}$$

Halving

$$\begin{array}{r} \text{Half } 672 \\ \diagdown \quad | \quad \diagup \\ 300 + 35 + 1 = 336 \end{array}$$