

Year 5 Written Methods + - x ÷

Year 5 written methods build on the children's understanding of column addition and subtraction. For multiplication, we move on from the grid and ladder methods and teach the children how to use short multiplication strategies before moving onto long multiplication. Once the children are secure on written versions of mental strategies for division, we move onto short division and write remainders as whole numbers or fractions.

Expanded column addition for money leading to compact column addition for adding several amounts of money

e.g. £14.64 + £28.78 + £12.26

$$\begin{array}{r}
 \text{£}14 \quad 60\text{p} \quad 4\text{p} \\
 \text{£}28 \quad 70\text{p} \quad 8\text{p} \\
 + \text{£}12 \quad 20\text{p} \quad 6\text{p} \\
 \quad \text{£}1 \quad 10\text{p} \\
 \hline
 \text{£}55 \quad 60\text{p} \quad 8\text{p}
 \end{array}$$

Compact column addition to add pairs of 5-digit numbers

Continue to use column addition to add towers of several larger numbers

Use compact addition to add decimal numbers with up to 2 decimal places

e.g. 15.68 + 27.86

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

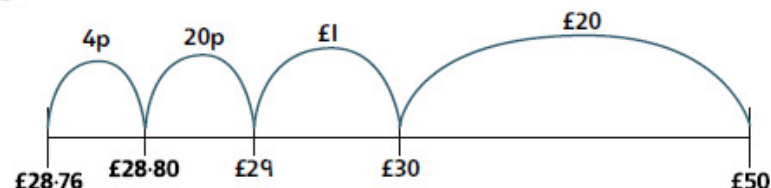
Compact column subtraction for numbers with up to 5 digits

e.g. 16 324 - 8516

$$\begin{array}{r}
 0 \quad 15 \quad 13 \quad 1 \quad 14 \\
 \cancel{1} \quad \cancel{6} \quad \cancel{3} \quad \cancel{2} \quad \cancel{4} \\
 - \quad 8 \quad 5 \quad 1 \quad 6 \\
 \hline
 \quad 7 \quad 8 \quad 0 \quad 8
 \end{array}$$

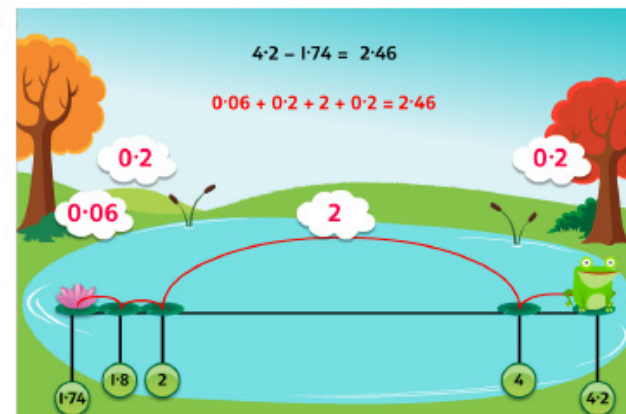
Continue to use counting up subtraction for subtractions involving money, including finding change

e.g. £50 - £28.76



Use counting up subtraction to subtract decimal numbers

e.g. 4.2 - 1.74



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Short multiplication of 2-, 3- and 4-digit numbers by 1-digit numbers
e.g. 435×8

$$\begin{array}{r} 435 \\ \times 8 \\ \hline 24 \\ \hline 3480 \end{array}$$

Long multiplication of 2-, 3- and 4-digit numbers by 'teen' numbers
e.g. 48×16

$$\begin{array}{r} 48 \\ \times 16 \\ \hline 480 \\ 288 \\ \hline 768 \end{array}$$

Use a written version of a mental strategy to divide 3-digit numbers by 1-digit numbers

e.g. $326 \div 6$ as 50×6 (300) and 4×6 (24), remainder 2

Short division of 3- and 4-digit numbers by 1-digit numbers
e.g. $139 \div 3$

$$3 \overline{) 139} \begin{array}{l} 46 \text{ r } 1 \\ 139 \end{array}$$

Give remainders as whole numbers or as fractions

$$\begin{array}{r} 4 \times 6 = 24 \\ \hline 54 \end{array}$$