

Addition

Y6

- Add several numbers of increasing complexity using columnar addition.

$$\begin{array}{r}
 23.361 \\
 9.080 \\
 59.770 \\
 + 1.300 \\
 \hline
 93.511
 \end{array}$$

$$\begin{array}{r}
 81,059 \\
 3,668 \\
 15,301 \\
 + 20,551 \\
 \hline
 120,579
 \end{array}$$

National Curriculum requirements:

Add whole numbers with more than 4 digits, using the formal written method of columnar addition.

Subtraction

Y6

- Continue with compact columnar subtraction, including subtraction of decimals.

$$\begin{array}{r}
 \cancel{9}^9 \cancel{8}^8 \cancel{10}^9, 699 \\
 - 89,949 \\
 \hline
 60,750
 \end{array}$$

$$\begin{array}{r}
 \cancel{15}^5 \cdot \cancel{11}^1 9 \text{ kg} \\
 - 36 \cdot 080 \text{ kg} \\
 \hline
 69 \cdot 339 \text{ kg}
 \end{array}$$

- Use estimation to check answers to calculations and to determine, in the context of a problem, levels of accuracy.

National Curriculum requirements:

Subtract numbers with more than 4 digits.

Multiplication

Y6

- Recall and use multiplication tables up to 12×12 (Including multiplying by 0 and 1).
- Continue to practise short multiplication.
- Continue to practise long multiplication.

$$\begin{array}{r} 3652 \\ \times 8 \\ \hline 29216 \end{array}$$

$$\begin{array}{r} 1234 \\ \times 16 \\ \hline 7404 \\ 12340 \\ \hline 19744 \end{array}$$

- Multiply decimals using the grid method and progressing on to short multiplication.
- Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

National Curriculum requirements:

Multiply up to 4 digits by 2 digits using the formal written method of long multiplication.

Multiply numbers by 10, 100, 1000 giving answers up to 3 decimal places.

Division

Y6

- Consolidate short division.
- Children should be able to interpret remainders as whole number remainders, fractions or by rounding, as appropriate for the context.

$98 \div 7$ becomes

$$\begin{array}{r} 14 \\ 7 \overline{) 98} \end{array}$$

Answer: 14

$432 \div 5$ becomes

$$\begin{array}{r} 86 \text{ r } 2 \\ 5 \overline{) 432} \end{array}$$

Answer: 86 remainder 2

$496 \div 11$ becomes

$$\begin{array}{r} 45 \text{ r } 1 \\ 11 \overline{) 496} \end{array}$$

Answer: $45 \frac{1}{11}$

- Introduce long division.

$432 \div 15$ becomes

$$\begin{array}{r} 28 \text{ r } 12 \\ 15 \overline{) 432} \\ \underline{300} \\ 132 \\ \underline{120} \\ 12 \end{array}$$

Answer: 28 remainder 12

$432 \div 15$ becomes

$$\begin{array}{r} 28 \\ 15 \overline{) 432} \\ \underline{300} \\ 132 \\ \underline{120} \\ 12 \end{array} \quad \begin{array}{l} 15 \times 20 \\ 15 \times 8 \end{array}$$

$$\frac{12}{15} = \frac{4}{5}$$

Answer: $28 \frac{4}{5}$

$432 \div 15$ becomes

$$\begin{array}{r} 28.8 \\ 15 \overline{) 432.0} \\ \underline{300} \\ 132 \\ \underline{120} \\ 120 \\ \underline{120} \\ 0 \end{array}$$

Answer: 28.8

N.B: The above examples are taken from the National Curriculum for Mathematics appendix.

National Curriculum requirements:

Divide numbers up to 4 digits by a 2 digit number using the formal written method of short division where appropriate.

Divide up to 4 digits by a 2 digits whole number using the formal written method of long division.