

Multiplication

The children **should be encouraged to use this standard method.** However, for those who need support, the grid method may be used.

M9a: Long Multiplication Column

$$\begin{array}{r} 243 \\ \times 68 \\ \hline 1944 \quad (8 \times 243) \\ + 14580 \quad (60 \times 243) \\ \hline 16524 \end{array}$$

M9g: Long Multiplication Column

$$\begin{array}{r} 3786 \\ \times 48 \\ \hline 30288 \quad (8 \times 3786) \\ + 151440 \quad (40 \times 3786) \\ \hline 181728 \end{array}$$

Multiplying decimals

M9c: Column Multiplication

$$\begin{array}{r} 3.6 \\ \times 4 \\ \hline 14.4 \\ \hline 2 \end{array}$$

Division

Short division (bus stop) and long division.

D10i: Short Division

$$87.5 \div 7 = 12.5$$
$$\begin{array}{r} 12.5 \\ 7 \overline{) 87.5} \\ \underline{7} \\ 17 \\ \underline{14} \\ 30 \\ \underline{28} \\ 20 \\ \underline{20} \\ 0 \end{array}$$

Long division

$$\begin{array}{r} 28 \text{ r } 12 \\ 15 \overline{) 432} \\ \underline{30} \\ 132 \\ \underline{120} \\ 12 \end{array}$$
$$\frac{12}{15} = \frac{4}{5} = 0.8$$

1. Divide the divisor into the first digit of the dividend. If it can't divide then look at the next digit as a two digit number and divide.
2. Record the answer at the top of the bus stop i.e. **15 goes into 43 two times**, $15 \times 2 = 30$
3. Take the answer away from the two digit number at the start of the bus stop i.e. $43 - 30 = 13$
4. Carry down the ones from under the bus stop i.e. **132**
5. Repeat the above steps until the divisor can no longer go into the dividend



YEAR 6 WRITTEN METHODS IN MATHS

A guide for Parents/Carers



Year 6 expectations

- Use negative numbers in context and calculate intervals across zero.
- Compare and order numbers up to 10,000,000.
- Identify common factors, common multiples and prime numbers.
- Round any whole number to a required degree of accuracy.
- Identify the value of each digit to 3 decimal places.
- Use knowledge of order of operations to carry out calculations involving four operations.
- Multiply:
 - 4-digit by 2-digit
- Divide:
 - 4-digit by 2-digit
- Add and subtract fractions with different denominators and mixed numbers.
- Multiply simple pairs of proper fractions, writing the answer in the simplest form.
- Divide proper fractions by whole numbers.
- Calculate % of whole number.

Addition

Column addition

A7e: Column Addition

$$\begin{array}{r}
 787567 \\
 + 446278 \\
 \hline
 1233845
 \end{array}$$

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Subtraction

Column subtraction

S11e: Column Subtraction

$$\begin{array}{r}
 742831 \\
 - 427358 \\
 \hline
 315473
 \end{array}$$

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Addition involving money and decimals

A7i: Column Addition
With Money

$$\begin{array}{r}
 £38.25 \\
 + £27.46 \\
 \hline
 £65.71
 \end{array}$$

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Subtraction involving decimals

S11h: Column Subtraction
With Decimals

$$12.4 - 5.97 = 6.43$$

$$\begin{array}{r}
 12.40 \\
 - 5.97 \\
 \hline
 6.43
 \end{array}$$

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