

## Year 6 Arithmetic Objectives

These are the topics we have been/will be covering to prepare your child for the SATs Arithmetic paper. The methods we are teaching can be found in the Year 6 Arithmetic guide you have received.

<b>Addition and Subtraction</b>
Add and subtract whole numbers with more than 4 digits, including using formal written methods (column addition and subtraction) e.g. $500945 - 8769$
Add and subtract numbers up to 3 decimal places e.g. $8.25 + 5.231$ $6.45 - 1.679$
Calculate using negative numbers e.g. $10-12$ $-7 + 5$
<b>Multiplication and Division</b>
Recall multiplication and division facts for multiplication tables up to $12 \times 12$
Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 e.g. $45 \times 100$ $4.25/10$
Multiply one-digit numbers with up to two decimal places by whole numbers e.g. $6.57 \times 8$
Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication e.g. $\begin{array}{r} 3542 \\ \times 16 \\ \hline 21252 \\ +35420 \\ \hline 56672 \end{array}$
Divide numbers up to 4 digits by a one-digit number using the formal written method of short division e.g. $\begin{array}{r} 041 \text{ r } 3 \\ 4 \overline{) 167} \end{array}$
Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions or decimals e.g. $\begin{array}{r} 0403 \text{ r } 5 \text{ r } 5 \\ 16 \overline{) 6453} \quad 16 \\ \underline{- 64} \\ 0053 \\ \underline{- 48} \\ 05 \end{array} \quad .31$
Knowing square and cube numbers e.g. $2^3 = 8$ $8^2 = 64$
<b>Fractions</b>
Recognise mixed numbers and improper fractions and convert from one form e.g. $24/5 = 4 \frac{4}{5}$
Use common factors to simplify fractions e.g. $\frac{6}{30} (\div 6) = \frac{1}{5}$ $\frac{30}{30} (\div 6) = 5$
Add and subtract fractions with the same denominator e.g. $5/7 + 1/7 = 6/7$
Add and subtract fractions with different denominators and mixed numbers e.g. $5/6 + 1 \frac{7}{9} = 5/6 + 16/9 = 45/54 + 96/54 = 141/54 = 2 \frac{33}{54}$
Multiply proper fractions and mixed numbers by whole numbers e.g. $1 \frac{1}{2} \times \frac{3}{4} = 3/2 \times \frac{3}{4} = 9/8$
Multiply simple pairs of proper fractions, writing the answer in its simplest form e.g. $\frac{1}{4} \times \frac{1}{2} = 1/8$
Divide proper fractions by whole numbers e.g. $1/3 \div 2 = 1/6$
<b>Other content</b>
Use their knowledge of the order of operations to carry out calculations involving the four operations <b>BODMAS</b> $(2 \times 3) + 5$
Solve problems involving the calculation of percentages e.g. 15% of 360