

# Ashton West End Primary Academy

## Progression in Maths – Division

Year	Division Progression
<b>R</b>	Sharing objects into equal groups and count how many in each group, such as 10 biscuits on two plates.(in <b>Practical problems</b> )
<b>1</b>	Solve practical problems that involve sharing into equal groups halving and quartering Use of pictures, 100 square or number tracks/ lines, to solve problems. Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.
<b>2</b>	Record using the correct division symbol in number sentences. $6 \div 2 = \square$ $20 \div \square = 2$ $\square \div 3 = 8$  Pupils work with a range of materials and contexts in which multiplication and division relate to grouping and sharing discrete and continuous quantities, to arrays and to repeated addition. They begin to relate these to fractions and measures (for example, $40 \div 2 = 20$ , 20 is a half of 40). They use commutativity and inverse relations to develop multiplicative reasoning (for example, $4 \times 5 = 20$ and $20 \div 5 = 4$ ).  <b>Vocabulary of division.</b> Solve simple problems , including answers with remainders by informal methods such as drawing pictures or “counting on” with equal steps on a number line
<b>3</b>	Use the chunking method to show the use of times tables and its link with subtraction. When children are ready, move them onto short division ensuring they have a good understanding of place value. <b>Chunking Method</b> $\begin{array}{r} 7 \overline{)98} \\ - 70 \\ \hline 28 \\ - 28 \\ \hline 0 \end{array}$ $10 \times 7 = 70$ $4 \times 7 = 28$  <b>Short division</b> $98 \div 7$ becomes $\begin{array}{r} 14 \\ 7 \overline{)98} \\ \hline \end{array}$ Answer: 14
<b>4</b>	Pupils practise to become fluent in the formal written method of short division with exact answers.  <b>Short division</b> $98 \div 7$ becomes $\begin{array}{r} 14 \\ 7 \overline{)98} \\ \hline \end{array}$ Answer: 14

<p><b>5</b></p>	<p>Recognise that division is non-commutative. i.e. <math>10 \div 2</math> is not equal to <math>2 \div 10</math></p> <p>A number cannot be divided by 0.</p> <p><math>257 \div 7 = 36 \text{ r } 4</math></p> $\begin{array}{r} 36 \text{ r } 4 \\ 7 \overline{) 257} \\ \underline{14} \phantom{0} \\ 117 \\ \underline{112} \\ 5 \end{array}$ <p>Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.</p>
<p><b>6</b></p>	<p>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 by rounding, as appropriate for the context</p> <p>Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context.</p> <p style="text-align: center;"><math>496 \div 11</math> becomes</p> $\begin{array}{r} 45 \text{ r } 1 \\ 11 \overline{) 496} \\ \underline{44} \phantom{0} \\ 56 \\ \underline{55} \\ 1 \end{array}$ <p style="text-align: center;">Answer: <math>45 \frac{1}{11}</math></p> <p><math>432 \div 15</math> becomes</p> $\begin{array}{r} 28.8 \\ 15 \overline{) 432.0} \\ \underline{30} \phantom{0} \\ 132 \\ \underline{120} \\ 120 \\ \underline{120} \\ 0 \end{array}$ <p style="text-align: center;">Answer: 28.8</p> <p style="text-align: center;"><b>Long division</b></p> <p><math>432 \div 15</math> becomes</p> $\begin{array}{r} 28 \text{ r } 12 \\ 15 \overline{) 432} \\ \underline{30} \phantom{0} \\ 132 \\ \underline{120} \\ 12 \end{array}$ <p style="text-align: center;">Answer: 28 remainder 12</p>