

BY THE END OF YEAR 6...

Divide 4 digit by 2 digit using multiple of the divisor method
Divide 4 digit by 2 digit using short division method.

Dividing by a two-digit number

Following on from Year 5, children will now be confident using a compact layout for short division of a four-digit number by a single digit number. Where appropriate, children can continue to use this method when dividing by a two-digit number.

E.g.

1	1	0	4	5	r.1	OR	(depending on context)
4	9	4	5				

1	1	0	4	5	¹ / ₁₁
4	9	4	5		

More complex long division

Often the numbers involved in a division calculation will determine an appropriate method.

$$\begin{array}{r} 00 \\ 15 \overline{) 135} \\ \underline{15} \\ 135 \\ \underline{135} \\ 0 \end{array}$$

Provide children with a calculation such as $135 \div 15$ and to ask them to solve it using the method shown above. This will highlight the need for an alternative method to that of short division.

For this example, children will need to draw upon their mental calculation skills to estimate answers and explain their thinking. They will know that $15 \times 10 = 150$, and so should be expecting the answer to be less than 10. They may recognise that 135 is 15 less than 150, and so the answer is 9.

Children should be encouraged to draw upon known facts, and establish what they already know about the divisor. This can be recorded in a 'fact box' to support, if necessary.

Long division

Children will use knowledge of doubles and halves to generate fact boxes.

Remainders will be calculated through subtraction.

Handwritten long division of $80998 \div 28$. The quotient is 2892 with a remainder of 22. A 'Fact Box' is shown to the right, listing multiples of 28 from 28×1 to 28×10 .

$28 \overline{) 80998}$	Fact Box $\times 1 - 28$ $\times 2 - 56 \checkmark$ $\times 3 - 84$ $\times 4 - 112$ $\times 5 - 140$ $\times 6 - 168$ $\times 7 - 196$ $\times 8 - 224 \checkmark$ $\times 9 - 252 \checkmark$ $\times 10 - 280$
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