

Multiplication and Division: Remainders

<p>Aim: Practise to become fluent in the formal written method of short division with exact answers (non-statutory).</p> <p>I can use the short written method for division with remainders.</p>	<p>Success Criteria: I can set out the calculation correctly and start at the left-hand side.</p> <p>I can calculate how many times the divisor will go into the first digit of the dividend and write the answer on top of the line.</p> <p>I can regroup any remainders in the next column and continue the calculation, writing the answer on the top line.</p> <p>I can write the final remainder on the top line.</p>	<p>Resources: Lesson Pack</p> <p>Whiteboard and pens – class set</p> <p>Small manipulatives</p> <p>Dice</p>
	<p>Key/New Words: Written method, division, calculation, divide, remainders, regroup, divisor, dividend.</p>	<p>Preparation: Differentiated Short Division with Remainders Activity Sheet - 1 per child</p> <p>Multiplication Square – as required</p>

Prior Learning: It will be helpful if the children know the multiplication and division facts up to 12×12 , and can use the short method for division without remainders (covered in Written Methods for Division (1): Short Division).

Learning Sequence

	<p>Sharing: The children work in pairs. One child grabs a large handful of small manipulatives. The other child rolls one or two dice. Both partners then need to work together to share the cubes into the number of groups shown on the die or dice. Are there any left over? What is this called? On whiteboards, children write the number sentence to go with the calculation.</p>	
	<p>The Short Method for Division: Remind children of this method, emphasising the importance of setting out their work neatly, lining the digits up and calculating from left to right.</p>	
	<p>Practise: The children work independently working through the examples on the Lesson Presentation, practising the short written method of division. Go through each answer as a class, addressing misconceptions.</p>	
	<p>Remainders: Demonstrate what to do when the divisor won't share exactly into the dividend. There are no columns left, so it is not possible to use regrouping. This is a remainder. Model how to write this in a number sentence.</p>	
	<p>Find the Remainders: Children work in pairs to solve the calculations on the Lesson Presentation, laying out the calculation and writing the remainder correctly.</p>	
	<p>Short Division with Remainders: Children complete the differentiated Short Division with Remainders Activity Sheets, using the short written method for division with remainders.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Children complete two-digit by one-digit division calculations without remainders, progressing onto some calculations with remainders, within multiplication table knowledge. Provide Multiplication Squares for support if required.</p> </div> <div style="text-align: center;"> <p>Children complete two and three-digit by one digit division calculations with remainders.</p> </div> <div style="text-align: center;"> <p>Children complete more complex two and three-digit by one digit division calculations with remainders.</p> </div> </div>	
	<p>What's Missing? Children work with a talk partner to find the missing numbers in the written division calculations. Take feedback, asking children to explain their methods.</p>	

Masterit

Practiseit: The children play this differentiated [BBC Game](#) to practise the written method for division.

Playit: Children make and play [Monster Division Top Cards](#).

Makeit: Children make their own top card game using this [Template](#) to practise other multiplication and division facts.