

# Multiplication and Division:

## Division by Grouping

<p><b>Aim:</b> To use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers.</p> <p>I can divide larger numbers mentally by subtracting easy multiples.</p>	<p><b>Success Criteria:</b> I can partition numbers to make division easier. I can subtract multiples of 10. I can use known multiplication facts to calculate the answer and find remainders.</p>	<p><b>Resources:</b> <a href="#">Lesson Pack</a></p>
	<p><b>Key/New Words:</b> Partition, multiple, remainder, divisor.</p>	<p><b>Preparation:</b> Differentiated <a href="#">Division by Grouping Activity Sheet</a> - 1 per child</p>

**Prior Learning:** It will be helpful if the children know the multiplication and division facts up to  $12 \times 12$ .

### Learning Sequence

	<p><b>Squares and Cubes:</b> Looking at the grid on the <a href="#">Lesson Presentation</a>, children identify as many squared or cubed numbers as they can.</p>	
	<p><b>Multiples of Ten:</b> As a class discuss which tables you find easier. Why are the ten times tables so easy?</p>	
	<p><b>Dividing Using Multiples of Ten:</b> Explain that we can use multiples of ten to help us to solve division problems mentally. Read through the information on the <a href="#">Lesson Presentation</a> to model this method.</p>	
	<p><b>Work Together:</b> Children work in pairs to solve the division calculation mentally by using multiples of ten. Ask for volunteers to model each step of the method before revealing on the <a href="#">Lesson Presentation</a>.</p>	
	<p><b>Now Try These:</b> There are three examples to work through in pairs with answers.</p>	
	<p><b>Remainders:</b> Use the example on the <a href="#">Lesson Presentation</a> to model what to do if there is a remainder.</p>	
	<p><b>Division by Grouping:</b> Children complete differentiated <a href="#">Division by Grouping Activity Sheet</a>, <i>dividing larger numbers mentally by subtracting easy multiples.</i></p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="215 1467 574 1579"> <p> Children answer division problems by subtracting the multiple of ten (no remainders).</p> </div> <div data-bbox="614 1467 973 1691"> <p> Children answer division problems by partitioning into multiples of ten and subtracting these, then using known facts to calculate the remaining number of groups (no remainders).</p> </div> <div data-bbox="1013 1467 1372 1668"> <p> Children answer division problems by partitioning into multiples of ten and subtracting these, then using known facts to calculate the rest (with remainders).</p> </div> </div>	
	<p><b>Anagrams:</b> Check that the children know the key mathematical vocabulary that goes with this lesson by solving these anagrams. 1) ELUITMLP = <b>MULTIPLE</b> 2) EIERNMDAR = <b>REMAINDER</b> 3) TRTOPINIA = <b>PARTITION</b> Ask them to explain what the key words mean.</p>	

### Masterit

**Practiceit:** Children play this [Division Game](#) to practise recalling their multiplication tables quickly.

**Anagramit:** Children make a list of the key mathematical vocabulary for this multiplication and division topic. Then they make up their own anagrams and challenge each other to solve them.