

Multiplication and Division: Multiplication Magic

Aim: Multiply and divide numbers mentally drawing upon known facts. I can use multiplication tables facts to solve calculations with larger numbers and calculations with decimals.	Success Criteria: I can identify times table facts within larger numbers. I can multiply the fact by multiples of 10 to solve calculations with larger numbers. I can divide the fact by multiples of 10 to solve calculations with decimals.	Resources: Lesson Pack Whiteboards and pens
	Key/New Words: Divide, multiply, decimal, adjust, factors, multiple.	Preparation: Differentiated Multiplication Magic Activity Sheets – one per child Find a Friend Cards – cut up, one card per child

Prior Learning: It will be helpful if the children can multiply by 10 and 100 and know their multiplication tables up to 12×12 .

Learning Sequence

	Magic Wands: The children use the magic wand strips on the Lesson Presentation to practise their mental calculations.	
	Multiplying in Two Steps: Using the examples on the Lesson Presentation , demonstrate how to multiply mentally in two steps by (1) finding the times table fact and (2) and adjusting the answer by the appropriate power of 10.	
	Larger Numbers: Model multiplying multiples of ten using the examples on the Lesson Presentation .	
	Multiplying Decimals: Practise using the two-step strategy to multiply a decimal by a whole number.	
	Now Try These: The children work in pairs to practise multiplying larger whole numbers and decimals. Use whiteboards and pens to record answers.	
	Multiplication Magic: All groups complete differentiated Multiplication Magic Activity Sheets , using multiplication tables facts to solve multiplication calculations with larger numbers and calculations with decimals. <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> Children match up the calculations and answers (four-digit numbers multiplied by three-digit numbers). Next, they practise multiplying numbers with a decimal by a one-digit number. </div> <div style="text-align: center;"> Children match up the calculations and answers. Numbers are all related to the same fact and include numbers with decimals. The second task requires them to find calculations for a given answer. </div> <div style="text-align: center;"> Children match up the calculations and answers. Numbers are all related to the same fact and include numbers with decimals. The second task requires them to find calculations for a given answer, including numbers up to nine digits. </div> </div>	
	Find a Friend: Each child has a multiplication or division fact on their Find a Friend Card . They must find three other children with related facts and then calculate the answers as a team on a whiteboard or large piece of paper.	

Masterit

Explainit: Children design a poster to explain how to use the two-step strategy to multiply larger whole numbers and decimals mentally. They must include examples of calculations.