

Max's Mathematical Multiplication Mastery

Learning objective: To demonstrate fluency in multiplication facts and apply reasoning skills to solve complex number patterns.

Help Max the monkey solve his jungle puzzles! Choose a times table you are currently learning. Fill in the fact-file to show your mastery. Use the 'Greater Depth' section to prove your mathematical thinking with clear explanations.

Word bank: product · multiple · commutative · factor · inverse · calculation · pattern · partitioning

1. The Multiplication Table: Select a times table (up to 12x12). Write out four key equations and identify the product for each. (2 marks)

2. Commutative Property: Explain why 6×8 gives the same product as 8×6 . Use the term 'commutative' in your answer. (2 marks)

3. Inverse Operations: If you know that $7 \times 4 = 28$, how can you use this to solve a division problem? Write the related division calculation. (2 marks)

4. Pattern Spotting: Describe a pattern you notice when looking at the multiples of your chosen times table. Are they all odd, all even, or a mixture? (2 marks)

5. Justify Your Answer: Max says: 'If I multiply any whole number by an even number, the product will always be even.' Do you agree? Justify your reasoning with an example. (3 marks)

6. Greater Depth Challenge: What might happen to the product if you doubled one of the factors? Explain your theory using a specific example. (3 marks)

Extension challenge: Imagine you are Max the monkey. Write a short 'Math Advice' note to a younger student explaining the easiest way to memorise the 7 times table, including one clever trick or memory aid you have discovered.