Max’s Multiplication Marathon

Learning objective: To demonstrate fluency in multiplication facts and apply them to solve multi-step problems involving money and measure.

Read each question carefully. Show your working out clearly, as marks are awarded for your method as well as your final answer. Use your knowledge of the 6, 7, 9, 11, and 12 times tables.

Word bank: product · multiple · factor · calculate · equation · strategy · array

1. Max is organising his collection of star-charts. He has 8 folders, and each folder contains 12 charts. How many charts does he have in total? Write the multiplication equation to represent this. (2 marks)

2. Pip the caterpillar is buying bookmarks for his friends. Each bookmark costs £7. If Pip buys 9 bookmarks, how much change will he receive from a £100 note? (3 marks)

3. Zara the zebra is painting a pattern. She uses 6 colors, and for each color, she paints 11 stripes. If she decides to double the number of stripes for each color, how many stripes will she have painted in total? (3 marks)

4. Compare the products of 7 × 8 and 6 × 9. Explain why the product of 7 × 8 is greater, despite both numbers being close in value. (3 marks)

5. Max says: 'If I know that 12 × 5 = 60, I can use this to solve 12 × 50.' Justify his reasoning using your knowledge of place value. (3 marks)

6. What might happen to the final total if one of the factors in the equation 9 × 11 is increased by 1? Show your calculation and explain the result. (4 marks)

Draw: Draw an array that represents the calculation 7 × 6. Label the rows and columns to show how your array makes the multiplication easier to solve.

Extension challenge: Imagine you are designing a multiplication game for your class. Create a 'challenge card' that requires a player to use two different times tables to find the cost of items in a store. For example: 'If 4 apples cost £3 and 3 pears cost £2, how much would 12 apples and 12 pears cost?' Explain the strategy you used to solve your own problem.