Year 6 Maths Assessment: Long Multiplication Mastery

Learning objective: To multiply multi-digit numbers using formal written methods and solve multi-step problems.

Read each question carefully. Show all your working out to ensure you gain marks for your method, even if your final answer is incorrect. Ensure you write your final answer clearly on the provided lines.

Max the monkey is helping the BookFlik team organise the school library. He needs to calculate the total number of books and the cost of new supplies to ensure everything is ready for the new term.

Word bank: Product · Place value · Carry · Long multiplication · Column · Estimate

1. Calculate the product of 42 and 37 using a formal written method. (2 marks)

2. Max finds 12 boxes of bookmarks. Each box contains 84 bookmarks. How many bookmarks does he have in total? (2 marks)

3. A set of encyclopaedias costs £64. If the school orders 28 sets, what is the total cost? (3 marks)

4. Explain why it is important to place a zero in the ones column when multiplying by the tens digit in a long multiplication calculation. (3 marks)

5. Nova the owl is buying star charts for the science club. Each chart costs £15. If she buys 145 charts, how much will she spend in total? Show your working clearly. (4 marks)

6. A local stationary shop sells packs of pens for £23 each. If a teacher buys 46 packs, they pay with two £500 notes. Calculate the total cost of the pens and determine how much change the teacher should receive. (6 marks)

7. Max has 312 packets of stickers. Each packet contains 16 stickers. He claims that he has more than 5,000 stickers in total. Write a short explanation to prove if Max is correct or incorrect, using estimation or calculation to support your answer. (5 marks)

Draw: Draw a diagram or an array to represent the calculation 12 x 13, showing how you break it down into tens and ones.

Extension challenge: Total: /25