

Max's Mathematical Market Challenge

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

Max the Monkey is organising a community market to raise funds for the library. Help him calculate the totals for his stall. Show all your working out clearly, ensuring you align your digits correctly according to their place value. Remember to include the £ symbol in your final answers.

Word bank: product · multiplicand · multiplier · place value · exchange · total · calculation · estimate

1. Max is selling boxes of bookmarks. Each box costs £14 and he has sold 23 boxes. Calculate the total revenue. Explain why you chose your specific method. (3 marks)

2. The price of a hand-painted wooden toy is £28. If Max sells 45 toys, what is the total amount earned? Show your column multiplication steps. (3 marks)

3. Compare and contrast the result of multiplying 12×34 with 34×12 . Does the order of the numbers change the product? Justify your answer using mathematical reasoning. (3 marks)

4. Max has 16 crates of fruit, and each crate contains 25 pieces. If he sells all the fruit for £2 per piece, calculate the total potential profit. Show your two-step calculation. (4 marks)

5. What might happen if Max accidentally multiplied by 10 instead of 100 when calculating the total for 120 items? Explain the impact on his final total. (2 marks)

6. Create your own 'Market Mystery' word problem where a customer buys 15 items at £36 each. Write the problem and provide the solution below. (3 marks)

Extension challenge: Design a new stall for Max. Choose three different items to sell, assign each a price (between £10 and £99), and create a table showing the projected total income if he sells 50 of each item. Evaluate which item generates the highest profit and suggest a reason why.