Max’s Market Stall: A Mathematical Challenge

Learning objective: To calculate the total cost of items, determine change from a set amount, and solve multi-step problems involving decimals and money in the context of £ and p.

Max the monkey is helping set up a local market stall. Use your mathematical skills to help him manage the shop. Read the challenges carefully, show your working out, and justify your reasoning for each calculation.

Word bank: total · change · calculate · decimal point · remainder · pounds · pence · estimate · transaction

1. The Shopping List: Choose three items to sell on your stall and assign each a price (e.g., £2.50). Calculate the total cost for a customer buying all three items. (2 marks)

2. The Payment: If a customer pays for these three items using a £10 note, calculate the exact change they should receive. Show your subtraction clearly. (3 marks)

3. The Price Rise: Explain why a shopkeeper might decide to increase the price of an item by 50p. How would this change the total if a customer bought two of that item? (3 marks)

4. Budgeting: A customer has exactly £5.00 to spend. If they want to buy two items that cost £2.75 each, justify whether they have enough money. How much more or less do they need? (3 marks)

5. The Comparison: Compare buying four items at £1.25 each versus buying five items at £1.00 each. Which is the better value, and why? (4 marks)

6. What might happen if you miscalculated the decimal point when adding up your prices? Describe the impact this would have on the market stall's daily profit. (3 marks)

Extension challenge: Design a 'special offer' sign for your stall (e.g., 'Buy one, get one half price'). Calculate the new total cost for a customer purchasing four items under your new deal and explain the maths behind your discount.