

Max's Mathematical Market Challenge

Learning objective: To solve multi-step word problems involving money and decimals, applying logical reasoning to real-world scenarios.

Help Max the monkey organise the BookFlik Forest Market. Read the problem scenarios carefully, identify the relevant information, and show your working out step-by-step. Remember to include the correct units (£ and p) and justify your calculations.

Word bank: calculate · difference · total · expenditure · remainder · multiplication · division · decimal point · estimate · verify

1. Scenario 1: Max is buying supplies for the market. He buys 4 packs of seeds at £2.45 each and a watering can for £5.80. Calculate the total cost and explain how you ensured your decimal points were aligned during addition. (3 marks)

2. Scenario 2: Zara wants to buy 6 hand-painted bookmarks priced at 85p each. If she pays with a £10 note, calculate her change. Show your method for converting pence to pounds. (3 marks)

3. Scenario 3: Compare and contrast the cost of buying 12 individual stickers at 15p each versus a bulk pack of 12 stickers for £1.60. Which is the more economical choice? Justify your reasoning. (4 marks)

4. Scenario 4: If Pip the caterpillar has a budget of £20.00 and spends £4.25 on a notebook and £9.99 on a set of pens, what is the remainder? Predict what other items Pip could buy with the remaining funds. (3 marks)

5. Scenario 5: Max believes that dividing the total cost of a £15.00 fruit basket by 5 friends is easier than multiplying 5 by the individual share. Explain why this mathematical equivalence works. (3 marks)

6. Scenario 6: What might happen if the price of all items in the market increased by 10%? Describe the impact this would have on a customer's ability to purchase multiple items. (4 marks)

Extension challenge: Design your own complex word problem involving at least three different items with varying prices. Swap with a partner to see if they can solve your challenge using a formal written method.