Max’s Market Maths: Percentage Puzzles

Learning objective: To calculate percentages of amounts and solve multi-step problems involving percentages in a real-life context.

Read the scenario below and use your knowledge of fractions and decimals to help Max solve his market stall calculations. Show your working out clearly for each answer.

Max the monkey is helping at the local village market to raise funds for the school library. He has a box of 200 colourful bookmarks to sell. By midday, Max has sold 40% of his bookmarks. He also has a special offer on his 'History of Trees' notebooks, which usually cost £12.00 each, but he is offering a 25% discount to anyone who buys two or more. Max needs to keep track of his earnings and his stock to ensure he meets his fundraising target.

Word bank: Percentage · Fraction · Decimal · Equivalent · Discount · Calculate · Total

1. How many bookmarks has Max sold by midday? Show your calculation. (2 marks)

2. What is the value of the 25% discount on one 'History of Trees' notebook? (2 marks)

3. If a customer buys two notebooks with the 25% discount applied to each, what is the total price the customer pays? (3 marks)

4. Max wants to sell 75% of his 200 bookmarks by the end of the day. How many more bookmarks does he need to sell after his midday total to reach this goal? (3 marks)

5. Explain why 25% is the same as the fraction 1/4. (2 marks)

Draw: Draw a bar model representing the 200 bookmarks, clearly shading the 40% that Max has already sold.

Extension challenge: Imagine Max decides to increase the price of his notebooks by 10% instead of giving a discount. What would the new price of a £12.00 notebook be?