Grade 5 Mental Math Challenge: Max the Monkey's Market Calculations

Learning objective: To apply mental arithmetic strategies including the four operations, order of operations, and decimal place value to solve real-world financial problems.

Read each question carefully. You may use your knowledge of times tables, factors, and inverse operations to help you. Work through the problems in the order they appear. Show your working out clearly.

Max the monkey is visiting the local market to buy fruit for his friends. He has a budget of £20.00 to spend on bananas, mangoes, and coconuts. Use your mental math skills to help Max manage his shopping trip.

Word bank: estimate · operation · quotient · product · difference · sum · factor

1. Max buys 4 bunches of bananas at £1.75 each. Calculate the total cost of the bananas. Show your method. (2 marks)

2. If Max pays with a £10.00 note for the bananas, how much change should he receive? Use an inverse operation to check your answer. (2 marks)

3. Mangoes are priced at £1.20 each. Max buys 6 mangoes. How much do they cost in total? Explain the mental strategy you used to multiply 6 by 1.20. (3 marks)

4. Max finds a bag of 8 coconuts for £9.60. Calculate the cost of one single coconut. What calculation did you perform? (2 marks)

5. Max wants to buy some honey from Bea the Bee. A jar costs £2.50. Max wants to buy 3 jars, but he also has a voucher for £1.50 off his total bill. Write a single number sentence using the order of operations to calculate the final price. Solve the calculation. (3 marks)

6. Max has £20.00 in total. After buying the bananas (£7.00), the mangoes (£7.20), and the honey (£6.00 after the discount), does Max have enough money left to buy a bottle of water for £1.50? Justify your answer with calculations. (3 marks)

7. Extended Writing Task: Max decides to start a fruit stall. He buys 50 apples for £12.50. He sells them all for 50p each. Write a short explanation calculating his total profit. Describe the mental steps you took to calculate the total revenue and how you found the difference between his costs and his earnings. (10 marks)

Draw: Draw a basket of fruit with a price tag showing the total cost of Max's shopping trip (£20.20) and a small speech bubble from Max the monkey saying 'Mental math is bananas!'

Extension challenge: Total: /25