

Max's Mathematical Market Challenge

Learning objective: To solve division problems involving remainders and multi-step reasoning using £ and p.

Max the monkey is helping at the local village market. Use your knowledge of division to help him organize the stalls and calculate costs. Show your working out clearly, including how you deal with any remainders, and remember to use the £ symbol for your final answers.

Word bank: quotient · remainder · divisor · dividend · partition · calculate · equivalent · estimation

1. Max has 86 juicy apples. He needs to pack them into bags of 6 to sell. How many full bags can he pack, and how many apples will be left over? Explain your method. (3 marks)

2. The total cost of 4 identical boxes of strawberries is £28.40. Calculate the cost of one individual box. Justify why your answer is correct using inverse operations. (3 marks)

3. A customer has £15.00 to spend on bunches of carrots. Each bunch costs 70p. How many bunches can they buy? What might happen if they try to buy one more bunch? (4 marks)

4. Max finds a crate containing 145 stickers. He wants to share them equally between 8 friends. How many stickers will each friend receive, and how many will Max have remaining? (3 marks)

5. Compare and contrast the process of dividing 100 by 5 versus dividing 100 by 4. Why does the quotient change so significantly? (4 marks)

6. Max wants to divide £52.00 by 7. Explain why this division results in a decimal remainder and how you would round this for a real-life money problem. (4 marks)

Extension challenge: Design your own 'Market Stall' word problem for a partner. Your problem must involve dividing a total amount of money (at least £20.00) by a single-digit number, and your answer must include a remainder that you convert into pence.