Max’s Market Stall: A Fraction Challenge

Learning objective: Recognise, find, and write fractions of a discrete set of objects; solve problems involving increasingly harder fractions to calculate quantities and fractions to divide quantities, including non-unit fractions where the answer is a whole number.

Max the monkey is managing the local produce market. He has organised his fruit into crates, but he needs your help to calculate the correct portions for his customers. Read each scenario carefully and use your knowledge of fractions to solve the problems. Show your working out clearly.

Word bank: numerator · denominator · equivalent · fraction · quantity · part · whole

1. Max has a crate of 24 apples. He sells 1/4 of them to a neighbour. How many apples did he sell? Explain how you found your answer. (2 marks)

2. There are 30 pears in a basket. If 2/5 of the pears are green and the rest are yellow, how many yellow pears are in the basket? Justify your calculation. (3 marks)

3. Max has 40 plums. He decides to give 3/8 of them to the village school. How many plums does the school receive? (2 marks)

4. Compare and contrast: If you have 1/3 of 24 strawberries and 1/4 of 24 strawberries, which quantity is larger? Explain why the denominator affects the size of the fraction. (3 marks)

5. Max sells a punnet of 16 cherries for £4.00. If a customer buys 3/4 of the punnet, what fraction of the total price should they pay? Calculate the exact cost in pounds and pence. (3 marks)

6. What might happen if Max miscounted his fruit and actually had 36 plums instead of 40? Calculate the new amount for the 3/8 share. Is it possible to have a whole number of plums? Why or why not? (3 marks)

Draw: Draw a basket containing 20 pieces of fruit (a mix of apples and oranges). Colour 3/5 of the fruit red to represent apples and the remaining fraction yellow to represent oranges.

Extension challenge: Design your own fraction word problem involving a market stall. Use a total quantity that is a multiple of at least three different denominators (e.g., 24 or 60). Swap with a partner to see if they can identify the numerator and denominator to solve your mystery!