

Class 4 Statistics: Data Detective Challenge

Learning objective: To interpret, present, and compare data using bar charts, pictograms, and tables, and to solve comparison, sum, and difference problems.

Read each question carefully. Show your working out for all calculations. Ensure you label your axes and titles when creating charts.

Max the monkey is organising a fruit stall for his friends. He recorded the number of pieces of fruit sold over the weekend: Apples (35), Bananas (50), Pears (20), and Oranges (45). Each piece of fruit costs 20p.

Word bank: tally chart · frequency · bar chart · pictogram · axis · scale · discrete data · interval

1. Using the data from the passage, calculate the total amount of money Max made from selling apples and bananas. Show your working. (3 marks)

2. If Max uses a pictogram where one symbol represents 5 pieces of fruit, how many symbols would he need to draw for the oranges? (2 marks)

3. Max wants to create a bar chart. Explain why it is important to choose an appropriate scale for the y-axis when representing his data. (3 marks)

4. Compare the sales of pears to oranges. What is the difference in the number of pieces sold? (2 marks)

5. Zara the zebra thinks that if the price of an apple increased to 30p, the total revenue would remain the same if they sold 10 fewer apples. Justify your answer with a calculation. (4 marks)

6. Construct a bar chart below using the data provided in the passage. Ensure you include a title, labelled axes, and a consistent scale. (6 marks)

7. Extended Writing: Evaluate Max's data. If he wants to increase his total profit next weekend, what strategies could he use based on the current sales trends? Consider the popularity of different fruits and potential pricing changes. (5 marks)

Draw: Draw a bar chart representing the fruit sales: Apples (35), Bananas (50), Pears (20), and Oranges (45). Use a scale that goes up in intervals of 5 or 10.



Extension challenge: Total: /25. Challenge: What might happen to the data if Max decided to introduce a 'Mixed Fruit Bag' for £1.00? How would this affect the way he records his frequency data in a tally chart?