

Max's Market Stall Statistics

Learning objective: To interpret and present data using line graphs and tables, and solve comparison, sum, and difference problems.

Read the data collected by Max the monkey about his fruit stall sales. Analyse the information to answer the questions, ensuring you show your working out for multi-step problems.

Max has been busy tracking the sales of his fruit stall over the last five days to understand his customers' preferences. He recorded the total revenue in pounds (£) each day: Monday £24.50, Tuesday £31.00, Wednesday £28.50, Thursday £42.00, and Friday £55.50. Max noticed that as the week progressed, the demand for fruit increased steadily, likely due to the sunny weather forecast. He wants to use this data to predict how much stock he should order for the following week.

Word bank: line graph · axis · interval · data · frequency · trend · fluctuation · total

1. Calculate the total revenue Max earned from his fruit stall over the five-day period. (2 marks)

2. What is the difference in revenue between the quietest day and the busiest day? (2 marks)

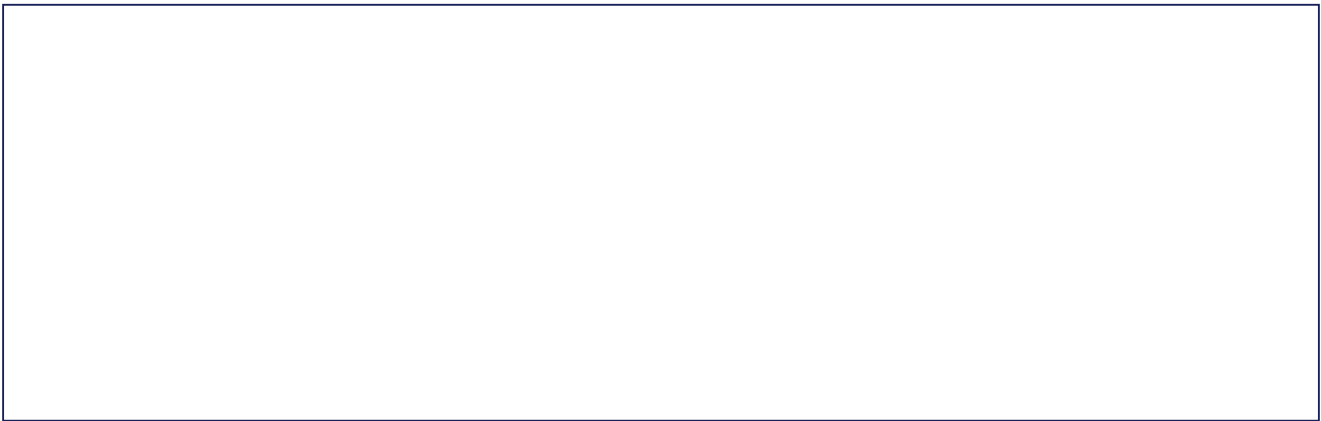
3. Explain why Max might see a 'fluctuation' in his daily earnings. What external factors could influence a customer's decision to spend money at his stall? (3 marks)

4. If Max predicts that Friday's revenue will increase by a further £12.50 next week, what would his projected revenue for that day be? (2 marks)

5. Compare and contrast the revenue trends between Monday and Wednesday. Why might the revenue have dipped on Wednesday compared to Tuesday? (3 marks)

6. Justify why a line graph might be a more effective way to represent this data than a pictogram. (3 marks)

Draw: Draw a line graph showing Max's revenue. Ensure your x-axis represents the days of the week and your y-axis represents the revenue in pounds (£). Use an appropriate scale for your intervals.



Extension challenge: Max wants to aim for a total revenue of £250.00 over a six-day week. Based on his current growth trend, design a target table for Saturday's sales. Justify your predicted figure by explaining the mathematical pattern you identified in his weekday sales.