

Max's Market Data Challenge

Learning objective: To interpret, construct, and calculate using line graphs and pie charts.

Read the data passage carefully and use Max the monkey's mathematical tips to solve the problems below. Show your working clearly.

Max is helping the local community farm stall track their fruit sales over one week. On Monday, they sold 15kg of apples. By Wednesday, sales increased to 25kg, but on Friday, they dropped to 10kg. Max also created a pie chart of total sales for the weekend: 50% were strawberries, 25% were blueberries, and the remaining 25% were raspberries. The total weight of berries sold at the weekend was 40kg.

Word bank: line graph · pie chart · frequency · axis · calculate · data set · proportion

1. Using the data from the passage, calculate the total weight of apples sold between Monday and Friday. If apples cost £3 per kg, what was the total revenue from apples? (2 marks)

2. Max says that if you plot the apple sales on a line graph, the points would be (Monday, 15), (Wednesday, 25), and (Friday, 10). What is the difference in kg between the highest and lowest sales? (1 mark)

3. Based on the weekend pie chart, calculate the exact weight in kg of strawberries sold if the total weight was 40kg. (1 mark)

4. If the farm stall sold 40kg of berries in total, how many more kg of blueberries were sold compared to raspberries? (2 marks)

5. Max wants to add a new fruit to the pie chart. If he adds plums, explain how this would change the proportions of the existing fruit segments. (2 marks)

Draw: Draw a pie chart based on the weekend berry sales described in the passage. Use a compass to draw the circle and a protractor to ensure the 50% and 25% segments are accurate.



Extension challenge: Max found that the average price of a punnet of berries was £2.50. If the farm sold 80 punnets, calculate the total income. If they spend £85 on transport, what is their total profit?