

Max's Magnificent Market Statistics Quiz

Learning objective: To interpret, construct, and analyse data presented in tables, line graphs, and timetables.

Help Max the monkey calculate the takings at the woodland market. Read the data carefully and solve these statistical puzzles to prove your mathematical prowess!

Answer Key: 1. B, 2. True, 3. Line graph, 4. £18, 5. False, 6. 12, 7. 4, 8. 5, 9. 20, 10. 15. Marks: 1 mark per question.

Word bank: data · frequency · axis · interval · timetable · mean · total · trend

1. Max sold 5 bags of acorns for £2 each and 8 bags of berries for £1 each. What is the total frequency of items sold? A) 10, B) 13*, C) 18, D) 20 (1 mark)

2. True or False: On a line graph, the horizontal axis usually represents the variable that changes over time. (1 mark)

3. Which type of chart is best suited for showing the continuous change in temperature over the course of a single day? (1 mark)

4. If Pip the caterpillar spent £4 on Monday, £6 on Tuesday, and £8 on Wednesday, what is the total amount spent? (1 mark)

5. True or False: The 'mean' is calculated by subtracting the lowest value from the highest value in a data set. (1 mark)

6. A table shows that 3 owls, 4 foxes, and 5 lions visited the library. How many animals visited in total? (1 mark)

7. If a bus timetable shows departures at 09:00, 09:15, 09:30, and 09:45, what is the time interval in minutes between each bus? (1 mark)

8. Max has 2, 4, 6, 8, and 5 pieces of fruit. What is the median value of this data set? (1 mark)

9. If 5 children bought a book for £4 each, what was the total revenue collected? (1 mark)

10. In a bar chart where each square represents 2 units, how many units does a bar that is 7.5 squares high represent? (1 mark)

Draw: Draw a bar chart representing the number of different fruits Nova the owl collected: 10 apples, 5 pears, and 15 plums. Remember to label your axes!



Extension challenge: 1. Explain why a line graph would be an inappropriate choice for comparing the favourite colours of children in your class. 2. Compare and contrast the use of a bar chart versus a table for displaying complex data. 3. Justify why the 'mean' might be a misleading average if one value in a data set is significantly higher than the others. 4. What might happen to the interpretation of data if the scale on an axis does not start at zero? 5. Create a set of data (minimum 6 values) where the mean is exactly 10. 6. Propose a real-world scenario where a timetable is more useful than a tally chart.