Year 8 Statistics – Mixed Practice

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Year 8 · Maths · Statistics · Mixed practice · 30 questions

Name _____ **Date** _____

A. Mixed practice (mixed order)

1. In a survey of 72 students, 31 chose football. What angle should football have in a pie chart?

Answer _____

2. The stem-and-leaf diagram shows the masses, in kg, of some dogs (key: 2 | 3 means 23). 1 | 2 5 8; 2 | 5 9; 3 | 0 1 4 4 4 9; 4 | 6 8; 5 | 1 5. Find the range and the mode.

Answer _____

3. In a survey of 36 students, 15 chose football. What angle should football have in a pie chart?

Answer _____

4. The stem-and-leaf diagram shows the masses, in kg, of some dogs (key: 2 | 3 means 23). 1 | 2 2 2; 2 | 0 1 2; 3 | 0 1 1 9; 4 | 0 2; 5 | 0 1 1. Find the median and the range.

Answer _____

5. A frequency table shows the number of books read by 25 students (books: frequency). 1: 4; 2: 1; 3: 8; 4: 1; 5: 11. Find the mean, the median and the mode.

Answer _____

6. A pie chart shows how 72 people travel to work. The sector for 'bus' has an angle of 140°. How many people travel by bus?

Answer _____

7. A frequency table shows the number of books read by 40 students (books: frequency). 2: 11; 3: 9; 4: 4; 5: 8; 6: 8. Find the mean, the median and the mode.

Answer _____

8. The stem-and-leaf diagram shows the times, in seconds, for a puzzle (key: 2 | 3 means 23). 1 | 6; 2 | 1 9; 3 | 0 5; 4 | 3 7 7 8 9; 5 | 0 1 2. Find the range and the mode.

Answer _____

9. In a survey of 24 students, 7 chose football. What angle should football have in a pie chart?

Answer _____

10. A frequency table shows the number of books read by 20 students (books: frequency). 0: 3; 1: 7; 2: 2; 3: 2; 4: 6. Find the mean, the median and the mode.

Answer _____

11. A frequency table shows goals scored (goals: frequency) 1: 2; 2: 2; 3: 8; 4: 3. Amir finds the mean as (1 + 2 + 3 + 4) ÷ 4 = 2.5. Explain the mistake and find the mean.

Answer _____

12. The stem-and-leaf diagram shows the times, in seconds, for a puzzle (key: 2 | 3 means 23). 1 | 3; 2 | 2 3 5 6 6 7; 3 | 0 5; 4 | 5 6; 5 | 0 4 5 6. Find the median and the range.

Answer _____

13. In a survey of 60 students, 4 chose football. What angle should football have in a pie chart?

Answer _____

14. The stem-and-leaf diagram shows the ages of people at a swimming club (key: 2 | 3 means 23). 1 | 4 5 6; 2 | 3 5 6 8; 3 | 8 9; 4 | 5 5; 5 | 2 8. Find the range and the mode.

Answer _____

15. Which chart or diagram would you choose to show how the monthly rainfall in a town changed over two years? Explain why.

Answer _____

16. Jade says one very large value can change the range a lot. Is Jade right? Explain.

Answer _____

17. A frequency table shows the number of books read by 20 students (books: frequency). 2: 1; 3: 5; 4: 1; 5: 11; 6: 2. Find the mean, the median and the mode.

Answer _____

18. In a survey of 36 students, 12 chose football. What angle should football have in a pie chart?

Answer _____

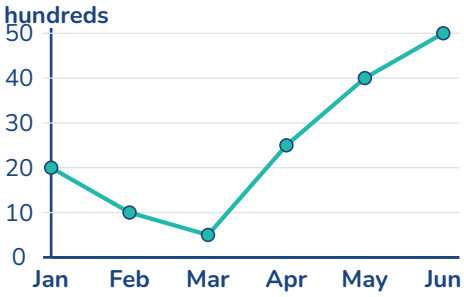
19. The stem-and-leaf diagram is 1 | 1 4 5 9; 2 | 5; 3 | 0 1 3; 4 | 4 (key: 1 | 4 means 14). Farah says the range is 3 because 4 − 1 = 3. Explain the mistake and find the range.

Answer _____

20. Pairs of values (hours of practice, points scored) are (4, 59), (6, 70), (7, 75), (8, 79), (9, 89), (10, 92). Plot them on a scatter graph (or picture them). What type of correlation is there? Explain.

Answer _____

21. The time series graph shows a shop's ice-cream sales, in hundreds, over six months. Between which two months did sales rise the most? Describe the overall trend.



Answer _____

22. Points scored by player A in six games: 53, 77, 78, 79, 71, 74. Player B: 76, 74, 49, 77, 54, 42. Compare the two players using the mean and the range.

Answer _____

23. Gus says a stem-and-leaf diagram keeps every original data value. Is Gus right? Explain.

Answer _____

24. The stem-and-leaf diagram shows the ages of people at a swimming club (key: 2 | 3 means 23). 1 | 2 2; 2 | 1; 3 | 0 6 7; 4 | 7 9; 5 | 1 3 6 7. Find the median and the range.

Answer _____

25. Which chart or diagram would you choose to show the exact heights of 25 plants, keeping every value and showing the shape of the data? Explain why.

Answer _____

26. A school council wants to find out students' views by asking every 10th person on a list of all students (systematic sampling). Give one advantage and one disadvantage of this method.

Answer _____

27. A pie chart shows how 60 people travel to work. The sector for 'bus' has an angle of 90°. How many people travel by bus?

Answer _____

28. Pairs of values (hours of sunshine, visitors (tens)) are (1, 65), (2, 54), (6, 72), (7, 65), (8, 68), (10, 58). Plot them on a scatter graph (or picture them). What type of correlation is there? Explain.

Answer _____

29. The stem-and-leaf diagram is 1 | 5; 2 | 0 4; 3 | 3 7 8; 4 | 2 3 8 (key: 1 | 4 means 14). Amir says the range is 3 because 4 – 1 = 3. Explain the mistake and find the range.

Answer _____

30. A frequency table shows the number of books read by 40 students (books: frequency). 0: 8; 1: 12; 2: 3; 3: 9; 4: 8. Find the mean, the median and the mode.

Answer _____