

Push Tasks



Explain your reasoning in terms of the type of data and what the display needs to show.

1. A student uses a pie chart to show the maximum temperature each day for a week. Explain why that is a poor choice.

2. A student uses a line graph for favourite ice-cream flavours. Explain why that is a poor choice.

3. A researcher has exact long-jump distances for 16 athletes. Which display would you choose, and why?

4. The same long-jump distances are grouped into 10 cm intervals. Which display would you choose, and why?

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Explain your reasoning in terms of the type of data and what the display needs to show.

5. A principal wants one display that compares the median and interquartile range of reading ages for two classes. Which display is best, and why?

6. A student says a bar graph and a histogram are basically the same. Give one reason why that is wrong.

7. Which display is best for showing how petrol price changes each week across a year? Explain.

8. Which display is best for showing the proportion of students in each of 4 house groups? Explain.

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A display can be technically possible and still be the wrong choice – weigh up what it hides as well as what it shows.

9. Which display is best for showing the distribution of travel times to school when the times are grouped into intervals? Explain.

10. Which display is best for showing the exact number of books read by each student in a small class? Explain.

11. A teacher wants to compare the spread of test scores for Year 9 and Year 10 using one display. Which display is best, and why?

12. A student chooses a pie chart for grouped exam-score intervals because there are categories. What is the better display, and why?

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Compare displays that are easy to confuse: think about what each one preserves about the individual data values.

13. A weather report wants to show rainfall each month over five years. Which display is best, and why?

14. A dot plot and a histogram can both be used for numerical data. Give one situation where the dot plot is the better choice.

15. Give one situation where a histogram is better than a dot plot.

16. Choose the best display for each case and justify briefly: favourite pet, resting heart rate measured every minute, and house prices grouped into \$50,000 bands.