



Selecting appropriate displays

Mana Maths

Te reo Māori terms



kauwhata

graph

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whakaatu

display/show

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raraunga

data

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kāwai

category

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Selecting appropriate displays — Foundation

- 1.** Choose the best display for favourite pizza toppings: bar graph or line graph.
- 2.** Choose the best display for rainfall each month through a year: line graph or pie chart.
- 3.** Choose the best display for shoe sizes in one class: dot plot or time series.
- 4.** Choose the best display for colours of cars in a car park: pie chart or histogram.
- 5.** Choose the best display for test marks grouped into score intervals: histogram or pie chart.
- 6.** Choose the best display for a plant height measured every week: line graph or bar graph.
- 7.** Choose the best display for the number of pets owned by each student: dot plot or time series.
- 8.** Choose the best display for ways students travel to school: bar graph or line graph.
- 9.** Choose the best display for lengths of fish grouped into 5 cm intervals: histogram or bar graph.

10. Choose the best display for temperature at 9 am each day for two weeks: line graph or pie chart.

11. Which display best shows parts of a whole: pie chart or dot plot?

12. Which display best shows change over time: line graph or pie chart?

13. Which display best shows individual small whole-number values: dot plot or histogram?

14. Which display best shows grouped continuous data: histogram or bar graph?

Selecting appropriate displays — Proficient

- 1.** A class records daily attendance for 20 school days. Which display is best, and why?
- 2.** A survey asks students for their favourite sport. Which display is best for showing the frequencies, and why?
- 3.** A group records the masses of apples and sorts them into 20 g intervals. Which display is best, and why?
- 4.** A student records how many goals their team scored in each match this season. Which display is best, and why?
- 5.** A clinic compares the waiting times of two groups and wants to show median and spread. Which display is best, and why?
- 6.** A class records the number of siblings each student has. Which display is better: dot plot or pie chart? Explain.

- 7.** A scientist measures the temperature of water every minute for half an hour. Which display is best, and why?
- 8.** A shop groups customer ages into 10-year intervals. Which display is better: histogram or bar graph? Explain.
- 9.** A student wants to show what fraction of the class chose each lunch option. Which display is best, and why?
- 10.** A coach wants to compare the heights of two teams in one display. Which display is best, and why?
- 11.** A teacher writes the exact quiz scores out of 10 for each student. Which display is better: dot plot or histogram? Explain.
- 12.** A report shows the number of library books borrowed each month. Which display is better: line graph or pie chart? Explain.

Selecting appropriate displays — Excellence

- 1.** A student uses a pie chart to show the temperature at midday for 7 days. Explain why that is a poor choice.
- 2.** A student uses a line graph for favourite movie genres. Explain why that is a poor choice.
- 3.** A researcher has exact jump heights for 18 athletes. Which display would you choose, and why?
- 4.** A researcher has jump heights grouped into 5 cm intervals. Which display would you choose, and why?
- 5.** A principal wants one display that compares the median and interquartile range of test scores 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 term? Explain.
- 8.** Which display is best for showing the proportion of students in each house group? Explain.
- 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 heights 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?

- 13.** A weather report wants to show rainfall each month over three 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 colour, pulse rate every minute, and masses grouped into intervals.