

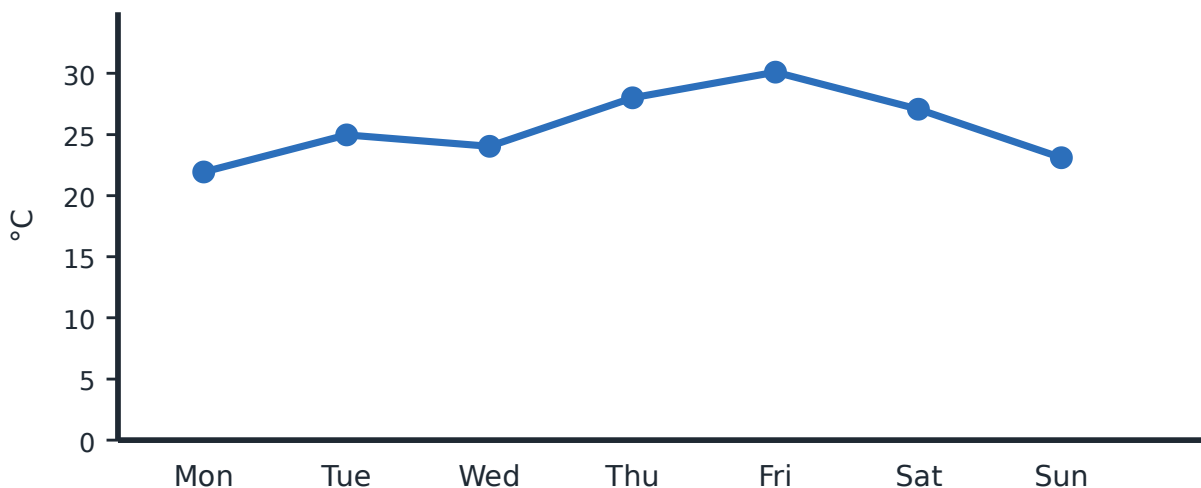
## Extension & Challenge — Interpreting Graphs

### Part A — Line Graphs

A [line graph](#) shows how something changes over time. The steeper the line between two points, the faster the change; a line going down shows a decrease.

To read a value, find the day on the bottom axis, go straight up to the dot, then across to the temperature axis.

#### Daily maximum temperature



*Daily maximum temperature for one week.*

1 Read the graph. What was the maximum temperature on Thursday? On Monday?

Thursday: \_\_\_\_\_ Monday: \_\_\_\_\_

2 Which day was the hottest, and which was the coolest?

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3 Between which two *consecutive* days did the temperature rise the most? By how many degrees?

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4 Find the difference between the hottest and the coolest day.

Answer: \_\_\_\_\_

5 On how many days was the maximum temperature **above**  $25^{\circ}\text{C}$ ?

Answer: \_\_\_\_\_

6 **Reasoning.** Describe the overall trend across the week. Would this single week be enough to predict next week's temperatures? Explain.

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## Part B — Pictographs & Column Graphs

### Part B — Pictographs & Column Graphs

A [pictograph](#) uses a symbol to stand for a number of items, so you must read the key. A [column graph](#) shows amounts as bar heights, and a side-by-side column graph compares two groups at once.

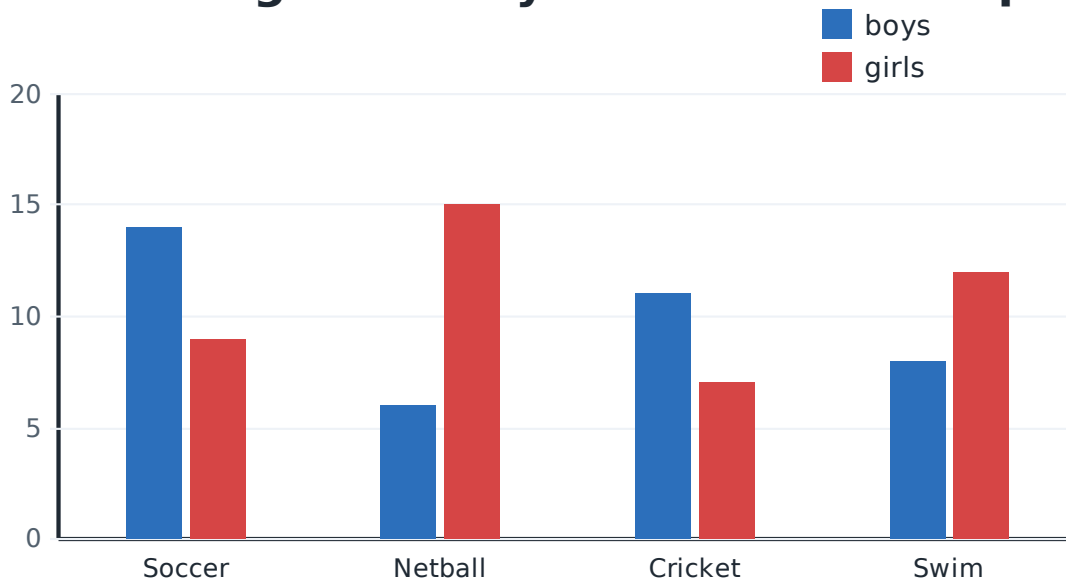
**Worked example.** If one star stands for 2 books and a row shows  $3\frac{1}{2}$  stars, that is  $3.5 \times 2 = 7$  books.

## Books read this month (each ★ = 2 books)



*Books read this month (each star = 2 books).*

## Reading a Side-by-Side Column Graph



Favourite sport (side-by-side column graph)

*Favourite sport, comparing boys and girls.*

1 Use the pictograph. How many books did each year level read this month?

Year 4: \_\_\_\_\_ Year 5: \_\_\_\_\_ Year 6: \_\_\_\_\_

2 Year 5's row shows a **half** star. Explain what the half star means and why it is needed.

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3 How many books were read altogether by the three year levels? How many more did Year 6 read than Year 4?

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4 Now use the side-by-side column graph below. Which sport is the most popular with boys? Which is most popular with girls?

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5 For one sport of your choice, read off the number of boys and girls and find the total who chose it.

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6 **Reasoning.** A pictograph uses a symbol for several items (here, one star = 2 books). Give one advantage and one disadvantage of a pictograph compared with a column graph.

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