

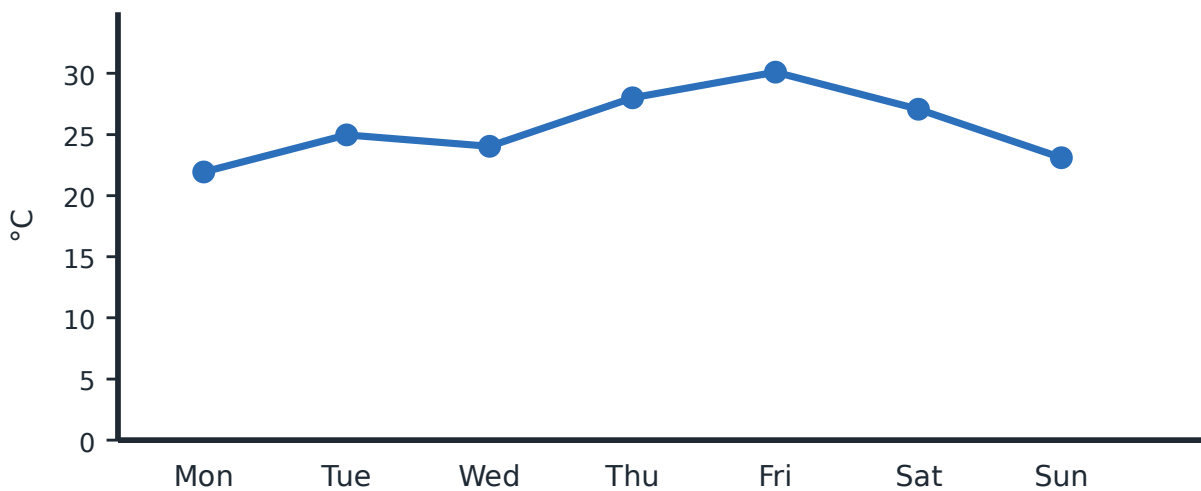
Extension & Challenge — Interpreting Graphs

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?

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

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

Answer: _____

5 On how many days was the maximum temperature **above** 25°C ?

Answer: _____

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

Part B — Pictographs & Column Graphs

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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.

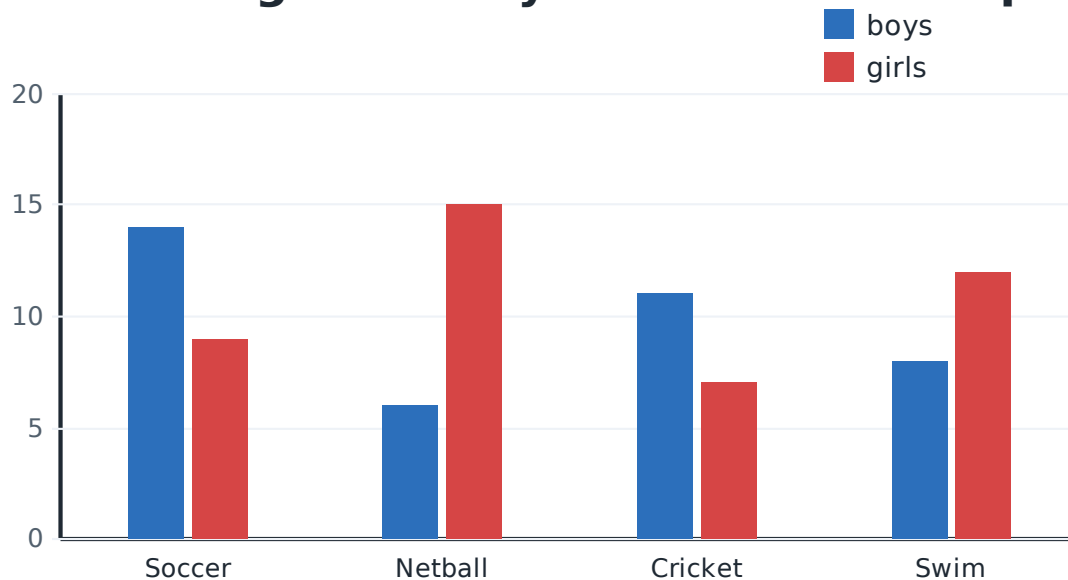
Worked example. If one star stands for 2 books and a row shows $3\frac{1}{2}$ stars, that is $3.5 \times 2 = 7$ books.

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.

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

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

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

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.