Critically evaluating graphs and misleading data

HOW TO ANSWER TODAY

- **Pie chart.** A full circle = 360°. A segment's angle ÷ 360° gives its fraction; multiply by 360° to go the other way.
- **Read a bar chart.** Read the top of each bar. Check the y-axis scale to see what each grid line is worth.

 Each grid line = 5, bar reaches the 4th line → value is 20

STRETCH PROBLEMS

1. Cian and his friends tally the colours of cars leaving the school gate at home time and draw the results as a pie chart. **1/4** of the cars are silver, shown as one segment of the pie chart out of **360°** in total. What angle does the silver segment cover?

 > In a pie chart of class survey results, 1/4 of pupils chose option A. What angle does that segment cover, out of 360° in total?

2. Mr Ó Briain pinned this week's daily-question results on the noticeboard as a pie chart. **3/5** of the pupils in 5th class chose 'hurling' as their favourite PE activity. The full pie chart shows **360°** in total. What angle covers the hurling segment?

 > In a pie chart of class survey results, 3/5 of pupils chose option A. What angle does that segment cover, out of 360° in total?

3. Mr Ó Briain's 5th class made a bar chart of favourite fruits for their healthy-eating display. The bars show Apple: **27**, Pear: **19**, Orange: **34** and Banana: **28**. By how much does the Pear bar differ from the Orange bar?

INVESTIGATE

Spot the misleading graph

Draw the same data twice: once fairly, and once in a way that **exaggerates** a small difference (try chopping the axis). Explain the trick you used and how a careful reader would catch it.