

Predict next year's school enrolment

MODULE 9 · MATHEMATICAL MODELING AND END-OF-YEAR REVIEW

REVIEW

PREDICTING NEXT YEAR'S SCHOOL ENROLMENT

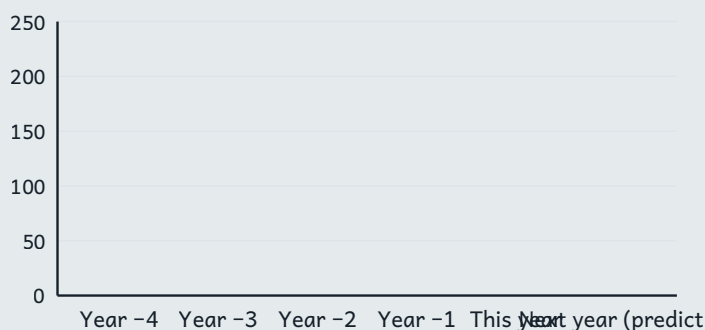
- 1 This year: **240 pupils**. Next year, **30 pupils** in 6th class are leaving and **35 Junior Infants** are starting.
- 2 Predicted total: $240 - 30 + 35 = \mathbf{245 \text{ pupils}}$.
- 3 That's an **increase** of 5 pupils — about $5/240 \approx \mathbf{2.1\%}$.
- 4 If the trend holds, the school will pass **250 pupils** within two more years.

HOW TO ANSWER TODAY

- **Mean (average).** Add ALL the numbers. Divide by HOW MANY there are.
Mean of 2, 5, 6, 9 $\rightarrow (2+5+6+9) \div 4 = 22 \div 4 = 5.5$
- **Find the rule.** Look at how each input changes to its output. Try $\times$ first, then $+$ or $-$.
 $3 \rightarrow 6, 5 \rightarrow 10, 7 \rightarrow 14 \rightarrow$ rule is $\times 2$
- **Pie chart.** A full circle = 360° . A segment's angle $\div 360^\circ$ gives its fraction; multiply by 360° to go the other way.
 $90^\circ \div 360^\circ = 1/4 \cdot 3/5 \text{ of } 360^\circ = 216^\circ$

TRY IT ON THE LINE

Plot enrolment for the last five years as a bar chart, look at the trend, then extend with one extra bar predicting next year.



1. Sample data: 180, 195, 205, 220, 230 $\rightarrow$ plot one bar each.
2. Look at the bar tops — does enrolment go up by about the same amount each year? ____
3. Draw a dashed bar for next year. Your prediction: ____ pupils.
4. Justify your prediction in one sentence.