

# Big investigation – how tall is the school?

## HOW TO ANSWER TODAY

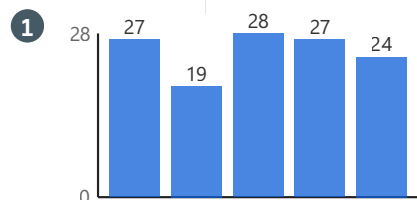
- **Mean (average).** Add ALL the numbers. Divide by HOW MANY there are.  
 Mean of 2, 5, 6, 9 →  $(2+5+6+9) \div 4 = 22 \div 4 = 5.5$
- **Scale drawing.** Scale 1:N means 1 unit on the drawing = N units in real life. Multiply the drawing length by N.  
 Scale 1:100, drawing 5 cm → real  $5 \times 100 = 500 \text{ cm} = 5 \text{ m}$
- **Y-axis scale.** Pick a step that makes the tallest bar fit but isn't so small the chart is huge.  
 Tallest = 75 → use steps of 10 (about 8 grid lines), not 1 (75 lines)

## WARM-UP

Use three different methods to estimate the height of the school. Aim to have at least two estimates agree to within 10% – if they don't, decide which one to trust and why.

	Working	Estimate (m)
a. Method 1 — shadow + 1 m stick	<input type="text"/>	<input type="text"/>
b. Method 2 — count bricks	<input type="text"/>	<input type="text"/>
c. Method 3 — count storeys	<input type="text"/>	<input type="text"/>
d. Compare: are two estimates within 10% of each other? (Y/N)	<input type="text"/>	<input type="text"/>
e. Which estimate do you trust most? Why?	<input type="text"/>	<input type="text"/>

## PRACTICE



Saoirse counts how many pupils cycle to school each day for a class survey. Over five days the numbers are 27, 19, 28, 27 and 24. What is the mean number of pupils who cycle each day?

- 2 Aoife is drawing a bar chart in her maths copy to show the reading-test scores for 5th class across the term. The highest score on any bar will be 34. She wants the chart to have about 10 to 15 grid lines from 0 up to the top. Should she use a y-axis step of 1, 5 or 10?

You are drawing a bar chart and the largest bar will be 34. Choose a sensible y-axis step from 1, 5 or 10 so the chart shows about 10 to 15 grid lines from 0 to the top.