Averages: flowchart

Planner week 3 · List, table or backwards? Follow the arrows to find out

Mean, median, mode or range

What have you been given?
Read the question: which average does it ask for?

List · Table · Mean given

A list of numbers

4, 7, 3, 9, 7, 6

1. **Mode**: most common = **7**
2. **Median**: in order 3, 4, 6, 7, 7, 9 → (6 + 7) ÷ 2 = **6.5**
3. **Mean**: 36 ÷ 6 = **6**
4. **Range**: 9 − 3 = **6**

✓ Median: put them in order first

A frequency table

Goals	Frequency	Goals × f
0	4	0
1	6	6
2	3	6
3	2	6

1. Add a column: goals × f
2. Totals: 18 goals, 15 matches
3. **Mean**: 18 ÷ 15 = **1.2**
4. **Mode**: highest frequency = **1 goal**

✓ Divide by 15, not by 4

The mean

The mean of 5 numbers is 8. Four of them are 6, 9, 7 and 10. Find the fifth.

1. Total: mean × how many = 5 × 8 = 40
2. Add the four you know: 6 + 9 + 7 + 10 = 32
3. Missing: 40 − 32 = **8**

✓ total = mean × how many

Are you comparing two groups?

No → **Sense check**: the mean is between the smallest and biggest

Yes

Compare an average AND the range: boys median 7, range 5 · girls median 6, range 3
The boys scored **higher on average**. The girls were **more consistent** (smaller range).

The big question

Is the data a **list**, a **table**, or do I know the **mean** and have to work backwards?

Remember

Mean: add, then divide
Median: the middle, in order
Mode: the most common
Range: biggest − smallest

Watch out

- The range is one number, not "3 to 9".
- In a table the mode is the value, not the frequency.
- Grouped data: use midpoints and say "estimate".