

Push Tasks – Answers



1. Compare the Q1 values alone, then the Q3 values alone. What underlying trend do you find?



Solution

Q1: 30,32,35 rising.

Q3: 55,58,61 rising –
both increase yearly

2. Calculate the percentage increase in Q1 revenue from Year 1 to Year 3.



Solution

30 → 35:

$$5/30 \times 100 \approx 16.7\%$$

3. Calculate the percentage increase in Q3 revenue from Year 1 to Year 3.



Solution

55 → 61:

$$6/55 \times 100 \approx 10.9\%$$

4. A student says this graph has no trend since values zig-zag. Explain why, using the figures.



Solution

Zig-zag = seasonality;
Q4 still rises yearly

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5. Membership dips sharply in 2020. Is this noise, or a new trend? Justify using 2021 and 2022.



Solution

Noise – 2021/2022 (55,60)
resume the pre-2020 rise

6. Ignoring the 2020 dip as noise, predict the 2023 membership value from the underlying trend.



Solution

Trend +5/yr from 60:
2023 = 65

7. Explain why telling noise apart from a genuine trend change matters for a decision-maker, e.g. before investing in expansion.

Solution

A wrong call can cost dearly

8. State this graph's trend (%), its seasonal cycle (peak/trough), and whether noise is present.



Solution

Increasing; Q3 peak, Q1
trough; no noise