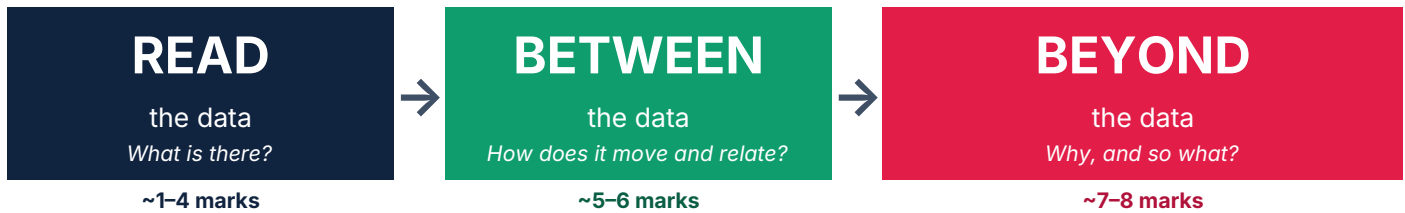


Read it. Read between it. Read beyond it.

How to **ANALYSE** data in three stages



Six moves in three stages. Describing the data only reaches the lowest band; each move builds on the one before, and the top marks are **beyond** the data. *Measure* is the bridge: precise numbers let you read **between**. (Approximate marks, Analysing out of 8.)

Stage	Move	What you write	Sentence starters
READ the data	Read <i>What does the data say?</i>	State the direction with dates and values . Check units , level or rate, time period and source; use % change, pp or basis points .	"Between __ and __, [X] rose / fell from __ to ___" "...a fall of __ percentage points."
	Measure <i>How big? How fast?</i>	Size the change: absolute vs relative, average annual change, range, real vs nominal, index numbers .	"On average, [X] grew by __% a year..." "In real terms, wages fell by about __%..."
BETWEEN the data	Characterise <i>What shape is the movement?</i>	Describe the movement: rate of change and momentum, volatility vs stability, turning points, trend vs seasonal vs irregular, one-offs .	"Although [X] kept rising, its growth slowed from __ to ___" "[X] peaked in __, then reversed..."
	Compare <i>How does it relate to something else?</i>	Relate it to another series: divergence or convergence (the gap), co-movement, leading or lagging . Correlation is not causation .	"The gap between [X] and [Y] narrowed from __ to __ pp..." "[Y] lagged [X] by about a year..."
BEYOND the data	Explain <i>Why did it happen?</i>	Give the cause and effect and the economic relationship (direct or inverse). Cyclical or structural? A shock or persistent?	"This is likely because..., which led to..." "As [X] rose, [Y] fell, an inverse relationship, because..."
	Extend <i>So what, for whom, how sure?</i>	Draw the implications for stakeholders , the limits of forecasting , the reliability of the indicator and missing data .	"This indicates / means / reveals / implies that..." "For [group], this means..." "However, the data does not show..."

The four meaning words **indicates** · **means** · **reveals** · **implies** — your ticket to reading beyond the data

% or percentage points?

When the data is **already a %**, use **pp**:
6% → 4% is **-2 pp** (a 33% fall).
Small rate moves: **basis points** (25 bp = 0.25 pp).

Your toolkit: over the page

24 tools of analysis, grouped by the six moves.
Each has **how to calculate or spot it**, a **sentence stem**, and **why it matters**.
Aim to use **at least one tool from each stage**.

Don't...

...go **source by source**: organise by idea.
...confuse **correlation** with **cause**.
...miss **one-offs**: a trend or a spike?

Toolkit: the methods of analysis

Calculate it, spot it, say it: 24 tools to **ANALYSE** data

Tool · why it matters	How to calculate or spot it	Write it like this
READ the data Read · Measure · ~1–4 marks		
Units: level, rate or index <i>The most common misread.</i>	Is it a level (\$, people), a rate (% change) or an index (base = 100)? Check the period and source.	"[X], measured as an annual % change, ..."
% change <i>Puts changes on a common scale.</i>	(new – old) ÷ old × 100 . Use it for levels and index numbers, not data already in %.	"...rose by __% from __ in __ to __ in __."
pp, % and basis points <i>Precision is marked.</i>	Already in %? Subtract : 6% → 4% = –2 pp (a 33% fall). 1 pp = 100 bp .	"...fell by 2 percentage points."
Absolute vs relative change <i>Base effects, per capita, scale.</i>	Absolute = new – old. Relative = change ÷ base. Per capita = ÷ population.	"Only __ in absolute terms, but a __% rise from a low base."
Average annual change <i>Simple or compound (CAGR).</i>	Simple : total change ÷ years (CPI: –4.0 pp ÷ 3 ≈ –1.3 pp a year). CAGR : $(\text{end} \div \text{start})^{(1/n)} - 1$.	"On average, [X] grew by __% a year from __ to __."
Real vs nominal <i>Purchasing power.</i>	Real ≈ nominal – inflation . Wages in 2025: 3.4% – 3.8% ≈ –0.4% in real terms.	"In real terms, wages fell by about __%."
Index numbers, rebasing <i>Compares different units.</i>	Index 112.5 = 12.5% above the base year . Index points are not %. Rebase : $(\text{value} \div \text{base value}) \times 100$.	"Prices are __% higher than in the base year."
BETWEEN the data Characterise · Compare · ~5–6 marks		
Rate of change of a rate <i>Disinflation vs deflation.</i>	Is the % change falling, or the level ? Inflation 6% → 4%: prices still rise , just more slowly.	"Inflation eased, but prices still rose, just more slowly."
Momentum (acceleration) <i>Early sign of a turning point.</i>	Compare successive changes . CPI: –3.7 pp, then –1.7 pp, so the fall is losing momentum .	"[X] kept falling, but the pace slowed from __ to __ pp."
Range of changes <i>Calculator-friendly volatility.</i>	Largest – smallest change . CPI: 1.4 – (–3.7) = 5.1 pp . Wages: 1.9 pp .	"Annual changes ranged from __ to __, a spread of __ pp."
Volatility vs stability <i>Price stability, risk, shocks.</i>	How far does it swing around its trend ? A bigger range means more volatile.	"[X] was far more volatile than [Y], which stayed within __ pp."
Turning points <i>Phases of the cycle.</i>	Where does direction change ? A peak is rise → fall; a trough is fall → rise. CPI: trough in 2024 .	"[X] bottomed out at __ in __, then reversed..."
Signal vs noise <i>Why the ABS adjusts its data.</i>	Separate trend , seasonal and irregular . Use seasonally adjusted, trend or underlying (trimmed mean) data.	"Underlying inflation held at __%, so the rise was mostly noise."
Outliers and one-offs <i>One point is not a trend.</i>	Spot a value far from the pattern , then check the source for a special cause.	"The spike in __ stands out from the trend because..."
Divergence and convergence <i>Real wages, terms of trade.</i>	Gap = X – Y . Widening = divergence ; narrowing = convergence . Wages – CPI: –4.5 → +0.8 pp.	"The gap between [X] and [Y] narrowed from __ to __ pp."
Co-movement and lags <i>Leading and lagging indicators.</i>	Which turns first? Leading = before, coincident = with, lagging = after. CPI peaked in 2022, wages in 2023.	"Wage growth lagged inflation by about a year."
Correlation vs causation <i>Avoids false conclusions.</i>	Moving together doesn't prove cause. Name a mechanism , or a third factor .	"[X] and [Y] moved together, but this does not prove..."
BEYOND the data Explain · Extend · ~7–8 marks		
Cause-and-effect chain <i>Turns description into analysis.</i>	Event → mechanism → effect on the data, using a model (AD/AS, demand and supply).	"This is likely because..., which led to..."
Direct vs inverse <i>QCAA "economic relationships".</i>	Same direction = direct ; opposite = inverse . Cash rate ↑, borrowing ↓ (inverse).	"As [X] rose, [Y] fell, an inverse relationship, because..."
Cyclical vs structural <i>Decides which policy works.</i>	Cyclical : tied to the business cycle, and reverses. Structural : a lasting change in the economy.	"This appears cyclical rather than structural, as..."
Shock vs persistent <i>The RBA looks through one-offs.</i>	Shock : sharp and temporary. Persistent : it continues. Electricity rose 21.5%, but 4.6% excluding rebates.	"Much of the rise appears to be one-off, as..."
Stakeholder implications <i>Earns the top band.</i>	Who wins, who loses? Households, borrowers, savers, firms, exporters, government.	"For [group], this means..."
Forecasting and its limits <i>Reading beyond, carefully.</i>	Project the trend cautiously and name what could change it. Don't extrapolate far.	"If this trend continues...; however, this depends on..."
Reliability, missing data <i>How sure can we be?</i>	Check the source, revisions and period. What is not shown : quarterly detail, regions, other measures?	"However, the data does not show..."

RULE OF THUMB

READ
gives the **numbers**

BETWEEN
shows the **pattern**

BEYOND
says what it **means**

Every number you calculate needs a sentence that says what it **INDICATES**.

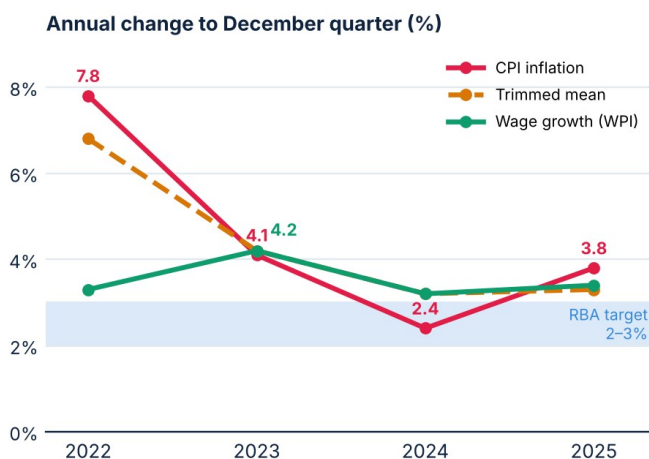
Worked example: read, between, beyond

One question, built stage by stage into a top-band **ANALYSIS**

THE QUESTION

Analyse the trends in inflation and wages shown in Sources 1 and 2.

SOURCE 1 · Inflation and wages, Australia, 2022–2025



SOURCE 2 · Electricity prices and the target

Electricity prices, year to December 2025

21.5%

as measured in the CPI

4.6%

excluding government rebates

The jump reflects energy bill rebates ending, not a sudden rise in what retailers charge.

RBA inflation target

2–3%

Source: ABS Consumer Price Index, December 2025

MODEL ANSWER · TOP BAND

READ Read	Annual CPI inflation fell from 7.8% in 2022 to 2.4% in 2024, before rising to 3.8% in 2025.
READ Measure	That is a fall of 5.4 percentage points over two years, then a rise of 1.4 pp .
BETWEEN Characterise	The fall slowed each year (–3.7 pp, then –1.7 pp) before reversing in 2024. Inflation was also far more volatile than wages, which stayed within a 1.0 pp range .
BETWEEN Compare	Wage growth went from 4.5 pp below inflation in 2022 to above it in 2023–24, then 0.4 pp below in 2025, while the trimmed mean held steady at 3.2–3.3%.
BEYOND Explain	Much of 2025's rise looks one-off : electricity rose 21.5%, but only 4.6% without rebates, which is why headline inflation jumped while the trimmed mean barely moved.
BEYOND Extend	This indicates that real wages rose only while inflation was falling. With underlying inflation still above the 2–3% target , household purchasing power remains under pressure — though annual data may hide quarterly swings.

Why it reaches the top band

READ
✓ Read : direction with dates and values. Measure : change in pp.
BETWEEN
✓ Characterise : momentum, turning point, range of changes. Compare : the wages gap (convergence), trimmed mean as the signal.
BEYOND
✓ Explain : shock vs persistent (rebates). Extend : a meaning word, real wages for households, and a limit of the data.

A 1–2 mark answer

"Inflation went down from 7.8% to 3.8%. Wages went up and then down. Inflation is higher than the target."

Stops at READ. No size in pp, no turning point or wages gap (BETWEEN), and no cause or meaning (BEYOND).

Keep reading

QCAA's lowest band is for answers that "identify or describe data but don't interpret". **READ** alone stays there; **BETWEEN** reaches the middle; **BEYOND** reaches the top.

Ask yourself: have I read **beyond** the data — a cause, and a meaning word?