

Cambridge AS & A Level · Economics 9708 · Notes

# Price stability AS

Read online at [pastopic.com/cambridge/economics-9708/notes/price-stability](https://pastopic.com/cambridge/economics-9708/notes/price-stability)

Last checked 1 October 2026

Read first: [Economic growth](#)

© 2026 Pastopic. Free for personal study. Please share the link, not the file.

---

## What you need to know

By the end of this topic you should be able to:

1. **Define inflation, deflation and disinflation.** Inflation is a sustained rise in the general price level; deflation is a sustained fall in the general price level; disinflation is a fall in the **rate** of inflation, while prices are still rising.
2. **Explain how changes in the price level are measured** with the **consumer price index (CPI)**, a weighted index of the prices of a typical household's purchases, and the **difficulties** that make it an imperfect measure.
3. **Tell money (nominal) values from real values:** nominal figures are in the prices of the time; real figures have the effect of price changes taken out. Convert between them with a price index.
4. **Explain the causes of inflation: demand-pull** (aggregate demand rising faster than the economy can raise output) and **cost-push** (rising costs of production), using AD/AS diagrams.
5. **Explain the consequences of inflation** for consumers, savers, borrowers, workers, firms, the government and the economy's trade, and weigh up when they are serious.

Questions on this topic often ask which policy would best reduce inflation. The policies themselves (fiscal, monetary and supply-side) have their own topics; this note shows how to match them to the cause of inflation.

---

## Understand it

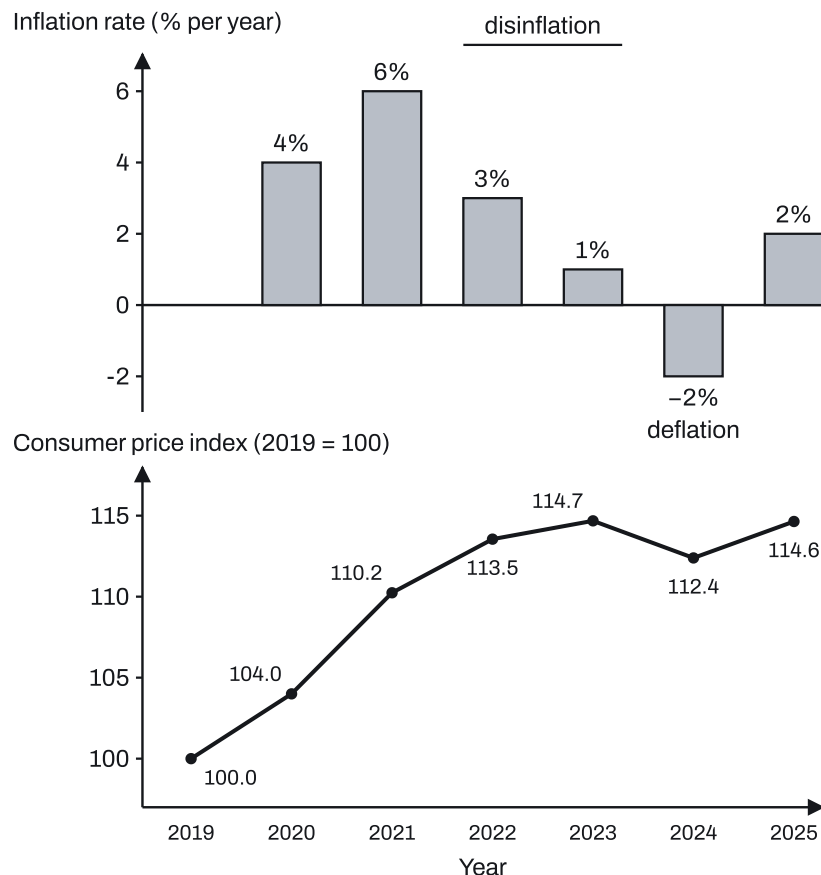
### Inflation, deflation and disinflation

The **general price level** is the average level of prices of all the goods and services people buy. Individual prices always move: some go up, some go down. Inflation is about the **average**, and about a rise that **keeps going**, not a one-off jump in the price of one product.

- **Inflation:** the general price level rises over time. The **rate of inflation** is the percentage rise over a year, for example 4%.
- **Deflation:** the general price level falls over time. The rate of inflation is **negative**, for example -2%.

- **Disinflation**: the rate of inflation falls, for example from 6% to 3%, but stays positive. Prices are **still rising**, just more slowly.
- **Price stability**: the price level is not rising or falling much, so long periods of both high inflation and deflation are avoided. Many governments and central banks aim for a low, steady rate of inflation, often about 2% a year.

The most important idea in this topic is the difference between the **rate** of inflation and the **level** of prices.



Read the two charts together:

- In 2022 and 2023 the **rate** falls (6% → 3% → 1%), but the **index** keeps climbing (110.2 → 113.5 → 114.7). This is disinflation: prices rise more slowly, they do not fall.
- Only in 2024, when the rate is **below zero**, does the index fall (114.7 → 112.4). This is deflation.
- In 2021 the bar is highest: prices rose fastest that year.

**The value of money.** When prices rise, each dollar buys less: the **real value** (or purchasing power) of money falls. If all prices double, the real value of a given sum of money halves. So inflation means a fall in the value of money, and deflation means a rise in it.

**Very high inflation.** When inflation runs at tens or hundreds of per cent a year (sometimes called **hyperinflation**), people lose confidence in their currency, spend it as soon as they are paid, and may switch to a foreign currency or to swapping goods.

## Measuring inflation: the consumer price index

The CPI measures the average change in the prices of the goods and services bought by a typical household. It is built in steps:

1. **A survey of household spending** finds what households buy and what share of their spending goes on each item.
2. **A basket** of several hundred representative goods and services is chosen (food, housing, transport, clothing, health care, entertainment ...).
3. **Weights** are given to each item according to its share of spending. If households spend 30% of their budget on food, food gets a weight of 30 out of 100, so a rise in food prices moves the index more than a rise in the price of, say, cinema tickets.
4. **Prices are collected** every month from many shops, websites and regions.
5. **A base year** is chosen and given the value 100. Each item's price is turned into an index relative to the base year, and the weighted average of these is the CPI.
6. **The inflation rate** is the percentage change in the CPI over 12 months.

**A weighted index worked through.** A small economy's basket has three groups:

| Group              | Weight | Price change over the year | Price index (last year = 100) |
|--------------------|--------|----------------------------|-------------------------------|
| Food               | 30     | +8%                        | 108                           |
| Housing and energy | 45     | +4%                        | 104                           |
| Transport          | 25     | -2%                        | 98                            |

$$\text{CPI} = \frac{30 \times 108 + 45 \times 104 + 25 \times 98}{100} = \frac{3240 + 4680 + 2450}{100} = 103.7$$

So the inflation rate is 3.7%, even though transport prices fell. The weights matter: the same price changes with food weighted at 45 and housing at 30 would give  $\frac{45 \times 108 + 30 \times 104 + 25 \times 98}{100} = 104.3$ , a rate of 4.3%. This is why the CPI can stay **unchanged** even when many prices change: rises in some weighted items can exactly offset falls in others.

**Inflation rate from two index numbers:**

$$\text{inflation rate} = \frac{\text{CPI this year} - \text{CPI last year}}{\text{CPI last year}} \times 100$$

For example, a CPI rising from 150 to 162 is  $\frac{12}{150} \times 100 = 8\%$  inflation.

**Difficulties in measurement.** The CPI is only an estimate of how the cost of living changes:

- **The basket and weights go out of date.** They are revised only every year or few years, but spending patterns change faster (new technology, a sudden change in fuel prices, a pandemic).
- **It is an average.** Pensioners, low-income households, rural families and people in different regions buy different baskets, so their own inflation rate can be far above or below the CPI.

- **Quality changes.** A new phone may cost more than last year's but do much more. Part of the price rise buys better quality, which the index finds hard to separate out.
- **New products** take time to be added to the basket.
- **Where people shop:** discounts, online shopping and informal markets may not be captured, and prices collected from a sample of shops may not be typical.
- **Some items may be left out**, such as some housing costs, so the CPI may miss an important part of what households pay.
- **Sampling:** the spending survey and price collection use samples, and people may not record their spending accurately.

## Nominal and real values

A **nominal** (money) value is measured in the prices of the time. A **real** value has had the effect of inflation removed, so it measures the actual quantity of goods and services the money can buy. Comparing nominal figures across years mixes up two things: more stuff, and higher prices. Real figures separate them.

To turn a nominal value into a real value in the prices of the base year:

$$\text{real value} = \text{nominal value} \times \frac{100}{\text{price index}} \quad \left( \text{or} \times \frac{\text{base index}}{\text{current index}} \right)$$

**Example.** A worker's pay rises from \$30 000 to \$31 500 (a 5% nominal rise) while prices rise 8% (index 100 → 108). Real pay =  $31\,500 \times \frac{100}{108} = \$29\,166.67$  in last year's prices. Real pay has **fallen by**  $\frac{29\,166.67 - 30\,000}{30\,000} \times 100 = -2.78\%$ : the worker can buy less than before, despite the pay rise.

Rules worth knowing:

- If nominal income rises by **more** than inflation, real income rises; by **less**, real income falls; by the **same** percentage, real income is unchanged.
- A rough guide: real % change  $\approx$  nominal % change – inflation rate (here  $5 - 8 = -3\%$ , close to the exact  $-2.78\%$ ).
- With **zero inflation**, nominal and real values move together.
- **Real interest rate** = nominal interest rate – inflation rate. A saver earning 5% while prices rise 8% has a real interest rate of  $-3\%$ : the savings buy less at the end of the year than at the start.
- Price changes **compound**: 2% deflation in each of two years is a fall of  $1 - 0.98^2 = 3.96\%$ , slightly less than 4%, because the second 2% is taken off a smaller price level.

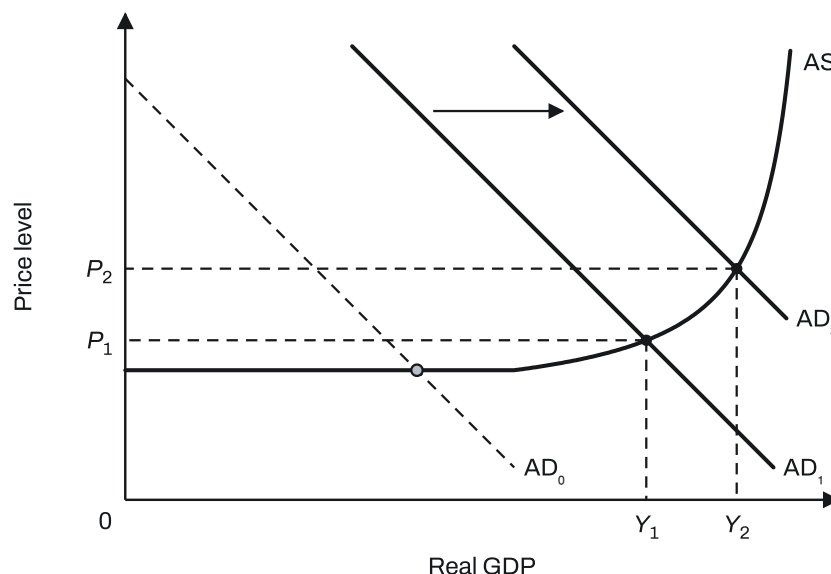
## Causes of inflation: demand-pull

**Demand-pull inflation** happens when aggregate demand ( $AD = C + I + G + (X - M)$ ) rises faster than the economy's ability to produce more. Too much spending chases too few goods, so firms raise prices.

Any component of AD can start it:

- **Consumption** rises after an income tax cut (more disposable income), lower interest rates (cheaper borrowing, less reward for saving), rising wages or more consumer confidence.

- **Investment** rises when interest rates fall or firms expect sales to grow.
- **Government spending** rises, for example on infrastructure or benefits.
- **Net exports** rise when the exchange rate depreciates (exports become cheaper abroad and imports dearer at home) or incomes abroad rise.



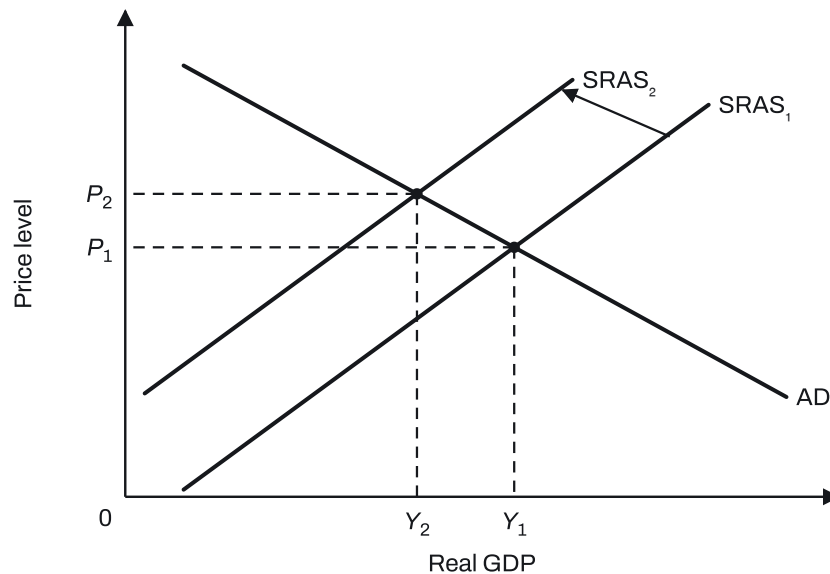
The shape of AS shows **why a rise in AD does not always cause inflation**:

- On the **flat** part (around  $AD_0$ ), there are plenty of unemployed workers and idle machines. Firms can produce more without paying more, so extra demand raises real GDP but not the price level.
- As the economy nears **full capacity**, resources run short. Firms compete for workers and materials, costs rise and firms can raise prices because demand is strong. The shift from  $AD_1$  to  $AD_2$  raises real GDP only from 536 to 629, but the price level from 109 to 131.
- At full capacity (where AS is vertical), extra demand raises **only** prices.

So whether a rise in AD is inflationary depends on **how much spare capacity** there is. It also depends on what the extra spending does to supply: government spending on training or infrastructure, or firms' investment in new machinery, can also increase the economy's productive capacity (shift LRAS right) and so reduce the pressure on prices over time.

## Causes of inflation: cost-push

**Cost-push inflation** happens when the costs of production rise and firms pass them on as higher prices. On an AD/AS diagram the short-run aggregate supply curve shifts **left**.



Costs can rise because of:

- **Higher wages** not matched by higher productivity (for example because of a labour shortage or strong trade unions), so labour cost per unit of output rises;
- **Dearer raw materials and energy**, such as a rise in world oil prices; with price-inelastic demand for oil, a country that imports it pays much more;
- **A depreciation of the exchange rate**, which makes imported materials and components dearer;
- **Higher indirect taxes** (such as a sales tax), which firms add to prices;
- **Falling productivity**, which raises the cost of each unit produced;
- **Higher import tariffs**, which make imported inputs dearer.

Cost-push inflation is especially unwelcome because the price level **rises while output falls** (from 400 to 300 in the diagram), so it can come with rising unemployment.

**The wage–price spiral.** Once prices rise, workers ask for higher wages to protect their real incomes; higher wages raise firms' costs and are also spent, so prices rise again. This is how a one-off rise in costs can become sustained inflation.

**Some changes cause both types.** A depreciation raises import costs (cost-push) **and** makes exports cheaper and imports dearer, so net exports and AD rise (demand-pull). A general pay rise raises firms' costs **and** households' spending. An increase in an indirect tax is different: it raises costs (cost-push) but leaves households less to spend, so it **reduces** demand-pull pressure.

**What lowers inflation?** The reverse: an appreciation of the currency (cheaper imports), higher labour productivity, lower world commodity prices, higher income taxes or interest rates (less spending).

## Causes of deflation

Deflation is the price level falling, and it can come from either side of the diagram:

- **A fall in AD** (reverse the shift in the second diagram): lower consumer confidence, higher interest rates, cuts in government spending or a fall in exports. Prices fall, but so do real GDP and employment: this is the damaging kind, linked with recession.
- **A rise in AS** (reverse the shift in the third diagram, SRAS moving right): new technology, higher productivity or cheaper energy lower firms' costs. Prices fall while real GDP and employment **rise**, and any pressure towards inflation eases: this kind is usually good for the economy.

## Consequences of inflation

### Costs of inflation:

- **Loss of purchasing power** for people whose incomes do not keep up: those on fixed incomes (some pensions, fixed benefits, fixed salaries) and workers with little bargaining power. Their real income falls.
- **Savers and lenders lose** when the interest rate is below the inflation rate (a negative real interest rate): the money they get back buys less than the money they lent.
- **Menu costs**: firms spend time and money changing price lists, labels, menus and websites.
- **Shoe leather costs**: people and firms spend time and effort moving money around to find the best interest rates and to hold less cash.
- **Fiscal drag**: if tax thresholds are not raised in line with prices, rising money incomes pull people into higher tax bands, so they pay a bigger share of income in tax even though their real income has not risen.
- **Lost international competitiveness**: if prices rise faster than in trading partners, exports become dearer abroad and imports relatively cheaper at home, so export revenue falls, spending on imports rises and the current account of the balance of payments worsens. The effect is bigger when demand for exports is price-elastic.
- **Uncertainty**: when inflation is high and hard to predict, firms find it hard to plan, so they invest less, which harms growth. Constant price changes also make it hard to tell whether a product has become dearer compared with others (sometimes called **inflationary noise**), so consumers and firms make poorer choices.
- **Rising costs for firms**: wages and materials become dearer, squeezing profits if firms cannot raise prices as fast.

### Benefits (or gains to some groups):

- **Borrowers gain**: the real value of their debts falls, and a negative real interest rate means they repay less in real terms.
- **Owners of assets** such as property may see their value rise.
- **Firms' profits may rise** if their prices rise faster than their costs, especially when inflation is driven by strong demand; this can encourage them to invest and employ more.
- **Low, steady inflation** is usually a sign of a growing economy, gives firms confidence, and lets relative wages adjust without anyone's money wage being cut.
- **The government** gains extra tax revenue from fiscal drag and the real value of the national debt falls.

### How serious is it? It depends on:

- **the rate:** 2% a year has small costs; 20% or more has large ones;
- **whether it is stable and expected:** predictable inflation can be built into wage deals and interest rates, so fewer people lose; an unexpected jump hurts savers and fixed-income earners and adds uncertainty;
- **how long it lasts:** a short spike after a rise in oil prices matters less than years of high inflation;
- **inflation in other countries:** if trading partners have similar inflation, competitiveness is hardly affected;
- **the cause:** demand-pull inflation often comes with growth and rising incomes; cost-push inflation comes with falling output.

**Consequences of deflation.** Falling prices raise the real value of money, so fixed-income earners and savers gain and exports may become more competitive. But when deflation comes from falling AD it is usually harmful: consumers may **delay purchases** because they expect prices to fall further, which cuts AD again; the **real value of debts rises**, so borrowers cut spending; firms' revenues fall while wages are hard to cut, so profits, investment and jobs fall.

## Key facts and formulas

There is no formula list in the 9708 exam, so everything here is "Learn it".

| Formula                                                                                                                                            | Status   |
|----------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| Inflation rate = $\frac{CPI_{\text{new}} - CPI_{\text{old}}}{CPI_{\text{old}}} \times 100$                                                         | Learn it |
| Weighted index = $\frac{\sum(\text{weight} \times \text{item index})}{\sum \text{weights}}$                                                        | Learn it |
| Real value = nominal value $\times \frac{\text{base-year index}}{\text{current index}}$                                                            | Learn it |
| Real interest rate = nominal interest rate – inflation rate                                                                                        | Learn it |
| Real % change $\approx$ nominal % change – inflation rate                                                                                          | Learn it |
| Price level after $n$ years at rate $r\%$ : $P_n = P_0 \left(1 + \frac{r}{100}\right)^n$                                                           | Learn it |
| $AD = C + I + G + (X - M)$                                                                                                                         | Learn it |
| Inflation: sustained rise in the general price level. Deflation: sustained fall. Disinflation: fall in the rate of inflation (prices still rising) | Learn it |
| Demand-pull: AD shifts right (near full capacity). Cost-push: SRAS shifts left                                                                     | Learn it |

## How to do it

We tagged 79 questions for this topic, 2021–2025: 50 Paper 1 multiple-choice questions and 29 Paper 2 data-response or essay questions. 23 of them have parts of more than one type, so the counts add up to 119.

| Question type                                                                                    | Questions |
|--------------------------------------------------------------------------------------------------|-----------|
| Explain causes of inflation or deflation (cost-push or demand-pull, often with an AD/AS diagram) | 31        |
| Consequences of inflation or deflation: costs and benefits, winners and losers                   | 27        |
| Evaluate a policy for reducing inflation or correcting deflation                                 | 20        |
| Read inflation-rate or CPI data: trends, comparisons, what the price level did                   | 16        |
| Nominal and real: calculate or interpret real values, purchasing power and real interest rates   | 13        |
| Define inflation, deflation, disinflation and price stability                                    | 6         |
| The CPI: what it measures, weights and why it can be inaccurate                                  | 6         |

### 1. Explain causes of inflation or deflation (31 questions)

**Multiple choice** (14 questions): sort the change into a type.

1. Ask: does it **raise firms' costs**? Then it adds to cost-push inflation (SRAS left).
2. Ask: does it **raise spending** ( $C$ ,  $I$ ,  $G$  or  $X - M$ )? Then it adds to demand-pull inflation (AD right).
3. Check the direction: a **fall** in costs or spending lowers inflation.

| Change                                       | Demand-pull            | Cost-push              |
|----------------------------------------------|------------------------|------------------------|
| Depreciation of the currency                 | rises (net exports up) | rises (imports dearer) |
| Appreciation                                 | falls                  | falls                  |
| Higher indirect tax                          | falls (less to spend)  | rises                  |
| Higher income tax or interest rates          | falls                  | —                      |
| Dearer imported oil (price-inelastic demand) | —                      | rises                  |
| Higher labour productivity                   | —                      | falls                  |
| General pay rise                             | rises                  | rises                  |

**Essay (a) parts [8]** (3 knowledge, 3 analysis, 2 evaluation):

1. **Define** inflation (or deflation) in one sentence (1).
2. **Draw the AD/AS diagram**: axes "price level" and "real GDP", the curves labelled, the shift shown with an arrow, and the old and new price levels marked  $P_1$ ,  $P_2$  (1). For demand-pull, AD shifts right; for cost-push, SRAS shifts left; for deflation, AD left or AS right.

3. **Explain the cause** with a chain, not an assertion: "a cut in income tax → more disposable income → consumption rises → AD rises faster than output can → the price level rises" (analysis).
4. **Evaluate**: whether this cause will really lead to inflation, and how much (spare capacity, productivity, how big the change is), then a **justified conclusion** that answers the question (2).

### Variations you will meet:

- **Reasons for more spending, then a judgement on whether it must push prices up**: give a separate reason for each part of AD you pick (for example, cheaper loans lead households to buy more cars; a boom in a trading partner lifts orders for exports). For the judgement, think about how busy the economy already is: with many idle workers and machines, firms can simply produce more; when almost everyone is employed, they can't, so prices take the strain. Also ask what the new spending buys: a new port or a better-trained workforce adds to what the economy can produce in later years, which eases the pressure on prices.
- **"Explain the difference between cost-push and demand-pull"**: say what starts each (costs against spending), which curve moves, and what happens to output (falls with cost-push, rises with demand-pull). Actually compare them; two diagrams with no comment don't explain.
- **"One demand-side and one supply-side cause of deflation; which is more damaging?"**: a fall in AD (diagram with AD left) and a rise in AS (SRAS or LRAS right). The AD fall brings lower output, recession and unemployment; the AS rise brings more output, more jobs and less inflationary pressure. So demand-side deflation is usually the more damaging, unless it is small and short.
- **"Which cause is most important in your economy (or a named economy)?"**: use real, recent examples (energy prices, a depreciation, strong consumer spending after tax cuts). Without a named economy you can't get the evaluation marks.
- **Data response, "identify the main cause" [2]**: read the extract; if it talks about energy costs, wage rises from a labour shortage or dearer imports, it is cost-push. Name **one** type, with a diagram showing SRAS left, if asked.
- **A single market**: panic-buying or a shortage in one market raises that product's price on a demand and supply diagram; many such rises together raise the general price level.

## 2. Consequences of inflation or deflation (27 questions)

**Multiple choice** (13 questions): who wins and who loses?

- Winners from inflation: borrowers (especially at fixed interest rates), owners of property and other assets, firms whose prices rise faster than their costs, the government (fiscal drag, smaller real debt).
- Losers: savers and lenders (when the real interest rate is negative), fixed-income earners, people holding cash, exporters (if prices rise faster than abroad).
- Deflation reverses these: fixed incomes and savings gain real value.
- If the inflation rate falls below the interest rate, savers gain in real terms.
- "Redistributive" effects are the ones that move real income between groups (from lenders to borrowers, from fixed-income earners to others); menu and shoe leather costs are not redistributive.

**Written parts [4], [6], [12]:**

1. **Say which rate you mean:** "high" or "increasing" inflation has more costs than "low and stable". If the question says "high", write about high inflation; answers about low inflation are capped.
2. **Analyse costs**, each as a chain. "Prices rise faster than in trading partners → exports dearer abroad → export revenue falls and import spending rises → current account worsens → fewer jobs in export industries."
3. **Analyse benefits** (or who gains) the same way. "Inflation reduces the real value of debt → borrowers repay less in real terms → they can spend more → AD and output rise."
4. **Evaluate:** how high, how prolonged, whether expected, compared with trading partners, what caused it, and who is affected. End with a justified conclusion.

For a 6-mark part: up to 3 marks for each side, 4 for analysis in all, then 2 for evaluation (1 kept for the conclusion). A one-sided answer gets no evaluation marks.

**Variations you will meet:**

- **Weighing the harm of inflation against its gains** for a country: costs (menu, shoe leather, fiscal drag, competitiveness, uncertainty) against benefits (lower real debt, profits, growth when inflation is low and stable). Use the extract: if it says inflation comes from strong demand and falling unemployment, it may be a sign of growth, so the benefits carry more weight.
- **Comparing who suffers more, households or businesses**, when inflation is high: consumers lose purchasing power (fixed incomes, weak bargaining power), face fiscal drag and shoe leather costs, but borrowers and home owners gain. Firms face menu costs, dearer inputs, lost sales abroad and uncertainty, but may gain profits if prices rise faster than costs. Judge which group, and which people within each group, lose most.
- **"Is a very high rate a problem?"** [4]: two costs for the country, one possible benefit, then a judgement (how it compares with other countries, how long it is expected to last).
- **Comparing a slowing of inflation with falling prices** [4]: define both; disinflation means inflation's costs continue but get smaller; deflation from falling AD can bring recession and unemployment. Judge by how big and how long each is.
- **Why deflation can be harmful:** people delay buying, the real burden of debt rises, profits and investment fall.

**3. Evaluate a policy for reducing inflation or correcting deflation (20 questions)**

The key idea: **the right policy depends on the cause.**

| Cause       | Policy that fits                                                                                    | Why                                          | Drawbacks                                                                                                           |
|-------------|-----------------------------------------------------------------------------------------------------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Demand-pull | Contractionary monetary (higher interest rates) or fiscal (higher taxes, lower government spending) | Reduces $C$ , $I$ or $G$ , so AD shifts left | Lower growth and more unemployment; time lags; higher interest rates can raise the exchange rate and hurt exporters |

| Cause                     | Policy that fits                                                   | Why                                                             | Drawbacks                                              |
|---------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------|--------------------------------------------------------|
| Cost-push                 | Supply-side (training, infrastructure, support for new technology) | Raises productivity and capacity, lowers costs, shifts AS right | Slow and costly; can't stop a rise in world oil prices |
| Deflation from falling AD | Expansionary monetary or fiscal                                    | Raises AD, output and prices                                    | May not work if confidence is very low                 |

Cutting AD to fight **cost-push** inflation makes the fall in output worse, so it is a poor match.

For a 12-mark (b) part (8 knowledge and analysis by level, 4 evaluation):

1. **Define** inflation and the policy.
2. **Explain the chain** from the policy to lower inflation: "higher interest rates → borrowing dearer, saving more rewarding → consumption and investment fall → AD shifts left → less pressure on prices".
3. **Explain its limits**: does it fit the cause? Time lags; lower growth and higher unemployment; demand may not respond much to interest rates.
4. **Compare with at least one other policy**. A balanced answer that weighs two policies reaches Level 3.
5. **Judge**: which is better depends on the cause of inflation, the time available and the state of the economy; often a mix. Conclude.

#### Variations you will meet:

- **"Keep interest rates high" or "increase interest rates"** [6]: for — reduces AD and so demand-pull inflation; against — slows growth, raises unemployment, strengthens the currency, does little against cost-push. Tie the judgement to the cause the extract gives.
- **Real interest rates**: if the interest rate is below inflation (a negative real rate), borrowing is still cheap in real terms, so a rise in the interest rate may not be enough to cut spending.
- **An inflation target**: announcing a target can make people expect low inflation, so workers ask for smaller pay rises, which helps stop a wage–price spiral; but it only works if people believe the central bank will act.
- **Maximum prices on many products** [6]: keeps listed prices down in the short run, but creates shortages and informal markets; it treats the symptom, not the cause.

## 4. Read inflation-rate or CPI data (16 questions)

1. **Check what is plotted**: the **rate** of inflation (%) or the **level** of prices (an index).
2. **If it is the rate**: positive means prices rose that year, even if the rate is falling (disinflation). Only a **negative** rate means prices fell (deflation). The highest bar or point is when prices rose **fastest**, not when they were highest.
3. **If it is an index**: a rising index means inflation; work out each year's rate with the formula to compare years. The index can be highest in a year when the rate was low.

4. **For data-response (a) parts [1–2]:** give the **overall trend** with figures from the start and end, then the main exception (for a series running 2.1%, 2.8%, 3.9%, 4.6%, 4.2%: "rose overall from 2.1% to 4.2%, although it dipped after peaking at 4.6%"). For "compare", write sentences that put the two series side by side, such as "unemployment fell in every year while inflation climbed and then eased", not a separate description of each.

#### Variations you will meet:

- **"During which period did only disinflation occur?":** the rate falls and stays above zero.
- **"Which country had a rising real value of money?":** the one with a negative inflation rate (deflation).
- **A CPI table, "which statement is correct?":** compute every year's rate; watch for a year when the index falls.

### 5. Nominal and real (13 questions)

1. **Real value of an amount:** divide by the index as a fraction of the base:  $\text{real} = \text{nominal} \times \frac{100}{\text{index}}$ .
2. **Real change:** compare the nominal % change with the inflation rate.
3. **Real interest rate:** nominal rate minus inflation; say whether it is positive or negative.
4. Show the working, and give a unit (\$, %).

#### Variations you will meet:

- **"What is the real price of a product?":** a price rising from \$2.00 to \$2.31 while the CPI rises 5% has a real price of  $2.31 \div 1.05 = \$2.20$  in the prices of the start of the year.
- **"The index doubled":** the cost of living doubled; this tells you nothing about nominal or real incomes.
- **"Income up 3%, inflation 3%":** nominal income up 3%, real income unchanged.
- **Compounding:** several years of  $r\%$  deflation add up to **less** than the total of the percentages; several years of inflation add up to **more**.
- **"Why use real, not nominal, GDP to measure growth?" [2]:** nominal growth includes rising prices; real growth removes them, so it shows the change in actual output and gives a meaningful comparison between years.

### 6. Define inflation, deflation, disinflation and price stability (6 questions)

All multiple choice, but essay and data-response parts often give the first mark for a definition.

- Use the precise words: **sustained, general price level**, and for disinflation, **rate** of inflation.
- Traps: deflation is a fall in the price level, not in output; disinflation is not falling prices; price stability does not mean no price changes at all, but the avoidance of long periods of inflation and deflation.
- Negative inflation means the cost of living has fallen and the purchasing power of money has risen.

## 7. The CPI (6 questions)

- **"What does the CPI measure?"**: the average change in the prices of a weighted basket of goods and services bought by households. It does not measure spending patterns or living standards.
- **"Why is price stability possible when many prices change?"**: the weights mean rises in some items can offset falls in others.
- **"Explain one reason the CPI may not be accurate"** [2]: make a point and develop it: "a laptop may cost 10% more than last year's model but have a faster processor and longer battery life (1); the index records the higher price as inflation even though part of it pays for a better product, so the CPI can overstate how fast living costs are rising (1)". Other points: new products that are not yet in the basket, and households whose spending differs from the average.
- **Essay "explain how inflation is measured"**: summarise the steps (survey, basket, weights, base year, index, percentage change) in a few lines, then spend most of the answer on the rest of the question.
- **Multiple choice on accuracy**: a larger sample makes it **more** accurate; out-of-date weights or an unrepresentative sample make it **less** accurate.

## Worked examples

### Example 1

The table shows a country's consumer price index.

| Year | 2021  | 2022  | 2023  | 2024  |
|------|-------|-------|-------|-------|
| CPI  | 200.0 | 210.0 | 216.3 | 214.1 |

Which statement is correct?

- **A** The price level fell in 2023 because the rate of inflation fell.
- **B** The country had disinflation in 2023 and deflation in 2024.
- **C** The price level in 2024 was lower than in 2022.
- **D** The real value of money rose in 2023.

[1]

Work out each year's rate: 2022:  $\frac{210.0-200.0}{200.0} \times 100 = 5\%$ ; 2023:  $\frac{216.3-210.0}{210.0} \times 100 = 3\%$ ; 2024:  $\frac{214.1-216.3}{216.3} \times 100 = -1.0\%$ .

In 2023 the rate fell from 5% to 3% but stayed positive (disinflation); in 2024 it was negative (deflation). The answer is **B** (1).

A is the classic trap: in 2023 prices still rose. C is wrong because 214.1 is above 210.0. D is wrong because prices rose in 2023, so money bought less.

## Example 2

In a country, a nurse's monthly pay rose from \$2400 in 2023 to \$2544 in 2024. Over the same period the CPI rose from 150 to 162. Banks paid an interest rate of 5% a year on savings.

- (a) Calculate the percentage increase in the nurse's pay and the rate of inflation. [2]
- (b) Calculate the nurse's 2024 pay in 2023 prices, and state what happened to her real pay. [2]
- (c) Calculate the real interest rate on savings and explain what it means for a saver. [2]
- (d) Explain one reason why the CPI may not accurately measure the change in the nurse's cost of living. [2]
- (a)** Pay:  $\frac{2544-2400}{2400} \times 100 = 6\%$  (1). Inflation:  $\frac{162-150}{150} \times 100 = 8\%$  (1).
- (b)**  $2544 \times \frac{150}{162} = \$2355.56$  (1). This is less than \$2400, so her real pay **fell**, by  $\frac{2355.56-2400}{2400} \times 100 = -1.85\%$ : prices rose faster than her pay (1).
- (c)** Real interest rate =  $5 - 8 = -3\%$  (1). The interest a saver earns does not keep up with prices, so the savings will buy less at the end of the year than at the start (1).
- (d)** The CPI's weights are based on the spending of an average household (1), but the nurse may spend a bigger share of her income on items whose prices rose faster than average, such as rent or bus fares, so her own cost of living may have risen by more than 8% (1).

## Example 3

In Country Z, unemployment is very low and workers across the economy have won pay rises of 9%. Explain, with the help of an AD/AS diagram, how these pay rises could cause inflation, and consider whether the resulting inflation is more likely to be cost-push or demand-pull. [8]

Inflation is a sustained rise in the general price level, usually measured by the percentage change in the CPI over a year (**1, AO1**). Wages are a cost of production, so if pay rises by 9% firms' costs rise and the SRAS curve shifts left, raising the price level from  $P_1$  to  $P_2$  and reducing real GDP, as in the cost-push diagram (**1, AO1**). Higher pay also gives households more to spend, so consumption rises and the AD curve shifts right; with little spare capacity, most of this shows up as a higher price level, as in the demand-pull diagram (**1, AO1**).

If productivity has not risen by 9%, the labour cost of each unit of output rises, and firms raise prices to protect their profit margins (**1, AO2**). Because unemployment is very low, firms cannot easily produce more to meet the extra spending, so they ration the goods by raising prices instead (**1, AO2**). Once prices rise, workers may press for further pay rises to protect their real wages, and this wage–price spiral can turn a single round of pay rises into sustained inflation (**1, AO2**).

The balance depends on productivity and spending: if output per worker also rose by about 9%, unit costs would hardly change and the cost-push effect would be small, and if workers saved much of the rise, the demand-pull effect would be small (**1, AO3**). Since the pay rises come on top of very low unemployment, both

effects are likely, but the cost-push effect probably comes first and is stronger, because costs rise as soon as the pay rise is paid while extra spending builds up over time; the inflation is therefore mainly cost-push (**1, AO3**).

(Knowledge 3, analysis 3, evaluation 2: **8/8**.)

## Example 4

Assess whether deflation is always more harmful to an economy than a low and stable rate of inflation. [**12**]

*Model answer (outline of each paragraph):*

1. **Definitions.** Deflation: a sustained fall in the general price level (a negative inflation rate). Low and stable inflation: prices rising slowly and predictably, say about 2% a year. (*Accurate knowledge.*)
2. **Why deflation can be more harmful.** When deflation comes from a fall in AD, households expect prices to keep falling and delay buying cars, furniture and houses; AD falls again, firms cut output and jobs, and the economy can slide into recession. The real value of debts rises as prices fall, so indebted households and firms cut spending and some default. Firms' prices fall while wages are hard to cut, so profits and investment fall. (*Developed chains on one side.*)
3. **Why low and stable inflation does little harm.** Because it is predictable, it can be built into wage deals and interest rates, so few people lose. Menu and shoe leather costs are small, and firms feel confident enough to invest. It also lets relative pay adjust without cutting anyone's money wage. (*Developed chains.*)
4. **The other side: when deflation is not harmful.** If deflation comes from a rise in AS, because new technology or higher productivity cuts costs, prices fall while output and employment rise; real incomes rise, savers and people on fixed incomes gain, and exports become more competitive. Meanwhile even low inflation has some costs: fiscal drag if tax bands are not raised, and a slow loss of real value for savers when interest rates are below the inflation rate. (*Balanced: Level 3.*)
5. **Evaluation.** It depends on the cause of the deflation (falling AD or rising AS), on how large it is and how long it lasts, and on whether people expect it to continue; a small, short fall in prices after a drop in world oil prices does little damage. It also depends on the economy's debts: a highly indebted economy suffers more from rising real debt. (*Evaluation weighing the conditions.*)
6. **Conclusion.** Deflation is not **always** more harmful: supply-led deflation can raise living standards. But deflation caused by falling demand is usually more harmful than low and stable inflation, because it feeds on itself through delayed spending and heavier debts, which is why most governments aim for low positive inflation rather than falling prices. (*Justified conclusion: full evaluation marks.*)

---

## Common mistakes

- **Thinking a falling inflation rate means falling prices.** In the March 2022 and June 2022 Paper 2 reports, examiners noted that many candidates said prices were falling when only the rate of inflation had fallen. While the rate is above zero, prices are still rising.

- **Not linking demand-pull inflation to AD.** The November 2021 and June 2023 Paper 2 reports noted answers that did not say demand-pull inflation comes from AD rising faster than the economy's capacity to supply. Name AD and explain the lack of spare capacity.
- **Getting the type wrong.** In June 2024 (Paper 22), many candidates called cost-push inflation demand-pull and drew an AD shift, and some linked a shortage of workers to demand-pull instead of seeing that it pushes up wages, a cost. Ask what changed first: costs or spending.
- **Drawing diagrams that don't earn marks.** In June 2024 an inaccurate diagram cost candidates a mark even when they named the right type. Label both axes (price level, real GDP), label the curves, and show the old and new price levels.
- **Asserting instead of explaining.** The November 2021 (Paper 23) and June 2023 (Paper 22) reports said many answers simply listed ways of controlling inflation without explaining how each one reduces it or comparing them. Write the chain: policy → spending or costs → AD or AS → price level.
- **Describing how the CPI is built at length.** In November 2021 (Paper 23), many candidates asked about measurement and the effects of inflation spent most of the answer on the mechanics of the CPI and scored low. Summarise the method briefly, then answer the rest of the question.
- **Not knowing the real interest rate.** In June 2024 (Paper 23), very few candidates could calculate it. It is the nominal rate minus the inflation rate, and it can be negative.
- **Confusing real income with disposable income.** In June 2022 (Paper 22), many candidates asked about real wages wrote about taxes and spending power instead of comparing the rise in money wages with the rise in prices.
- **Answering a different question.** In November 2021 some candidates wrote about deflation when asked about inflation (Paper 21), or evaluated the effects of inflation or policies when only its causes were asked for (Paper 22). Underline the key words before you start.

---

## How to get the marks

- **Definitions** earn the first knowledge mark: "a **sustained** rise in the **general price level**". For disinflation, say that the **rate** falls and prices still rise.
- **"Calculate"**: write the formula with the numbers in, then the answer with its unit (% , \$). Keep enough decimal places to answer the question (for example  $-1.85\%$ ).
- **"Compare"** data [2]: one explicit comparison of both series, with figures; not a description of each in turn.
- **"Describe the trend"** [2]: the overall direction with start and end figures, plus the main exception.
- **"Explain"** [2]: a point, then its development (the reason or the consequence).
- **Diagrams**: AD/AS with the axes labelled price level and real GDP; show the shift with an arrow and mark  $P_1$  and  $P_2$  (and  $Y_1$ ,  $Y_2$ ). Refer to the diagram in your writing.
- **8-mark (a) parts** are point-marked: 3 knowledge (definition, cause, diagram), 3 analysis (developed chains), 2 evaluation (a judgement with a reason, then a conclusion that answers the question).
- **6-mark data-response parts**: up to 3 marks a side, 4 for analysis in all, 2 for evaluation with 1 kept for a justified conclusion. Evaluation must use the country and the data in the extract.

- **12-mark (b) parts:** 8 for knowledge and analysis by level (Level 3 is balanced and accurate, usually weighing two policies, two groups or both sides), 4 for evaluation. A one-sided answer gets no evaluation marks.
- **"Consider", "assess", "to what extent":** say what the answer depends on (the rate, how long, whether expected, the cause, spare capacity, the time scale), then conclude.
- **"Your economy" or "a named economy":** give real details (recent inflation, energy prices, the exchange rate); without them the evaluation marks are lost.

---

## Quick check

1. A CPI has two groups: food, with weight 40, whose prices rose by 5%, and everything else, with weight 60, whose prices rose by 1%. Calculate the rate of inflation.
2. A country's price level falls by 3% in each of two years. By what percentage has it fallen altogether?
3. A country's nominal GDP rose from \$500 billion to \$540 billion while its price index rose from 100 to 106. Calculate real GDP in the second year (in first-year prices) and the rate of real growth.
4. Say whether each change adds to demand-pull inflation, cost-push inflation, both, or neither: (a) a rise in the rate of a sales tax; (b) a large rise in government spending on roads when there is little spare capacity; (c) a depreciation of the currency; (d) a rise in labour productivity.
5. Explain why a retired person living on a fixed pension loses from inflation. **[2]**

## Answers

1.  $\frac{40 \times 105 + 60 \times 101}{100} = \frac{4200 + 6060}{100} = 102.6$ , so inflation is 2.6%.
2.  $1 - 0.97^2 = 1 - 0.9409 = 0.0591$ , a fall of 5.91% (slightly less than 6%).
3. Real GDP =  $540 \times \frac{100}{106} = \$509.43$  billion. Real growth =  $\frac{509.43 - 500}{500} \times 100 = 1.89\%$  (nominal growth was 8%, but most of it was higher prices).
4. (a) Cost-push (and it reduces demand-pull, as people have less to spend). (b) Demand-pull. (c) Both: imports cost more, and net exports rise. (d) Neither: it lowers costs per unit, reducing cost-push pressure.
5. The pension stays the same in money terms while prices rise (1), so each month it buys fewer goods and services: the pensioner's real income and standard of living fall (1).

## Past questions to try

- **9708/12/O/N/24 Q15**: the real value of a salary from CPI data.
- **9708/13/O/N/25 Q22**: spotting disinflation on a graph of price changes.
- **9708/21/O/N/24 Q1**: Argentina's inflation data, the real interest rate, the problems of very high inflation and policies to control it.
- **9708/23/O/N/24 Q4**: cost-push inflation with a diagram, then the benefits against the costs of rising inflation.