Inflation calculator

Check how prices in the UK have changed since 1209

See how the value of money has changed over time. Understand the impact of inflation on your purchasing power.

Convert old pounds and shillings to modern decimal currency

What would goods and services costing

£ 10

in

2022

cost in

September 2025

Calculate

Your results

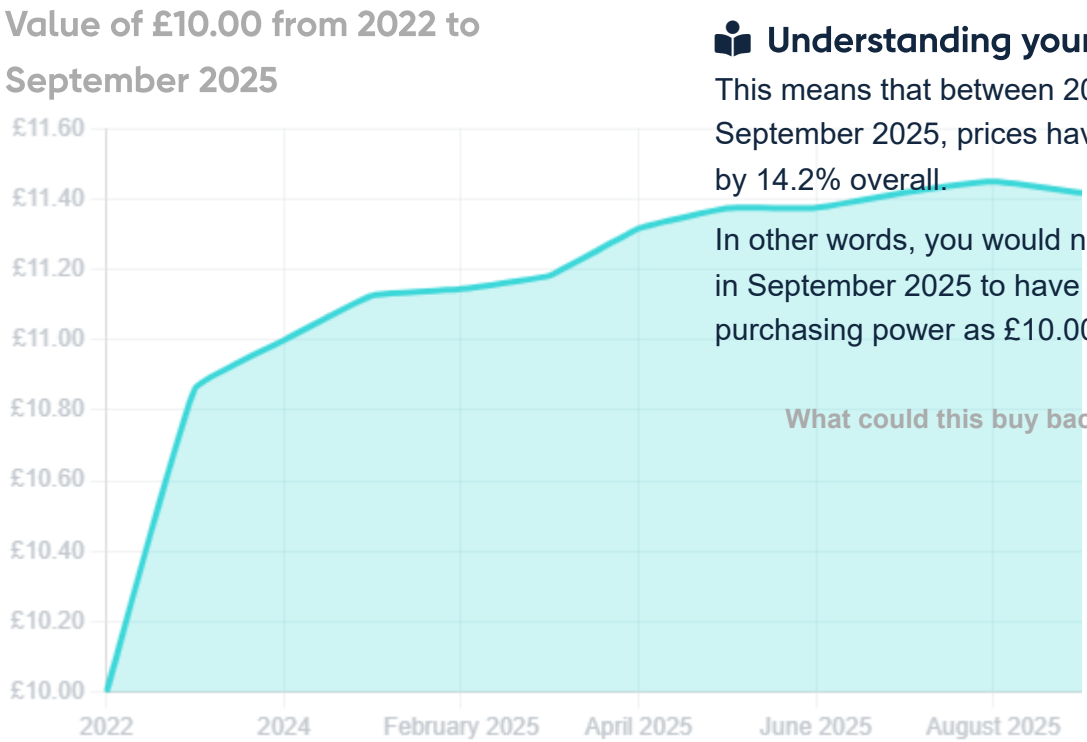
£11.42

What cost £10.00 in 2022 would cost £11.42 in September 2025.

Change in value:	**14.2%**
Average annual inflation:	**3.68%**

Shortcuts

Swap years | 10 years ago | 50 years ago | 100 years ago



Understanding your results

This means that between 2022 and September 2025, prices have increased by 14.2% overall.

In other words, you would need £11.42 in September 2025 to have the same purchasing power as £10.00 in 2022.

What could this buy back then?

The calculator uses Consumer Price Index (CPI) inflation data from the Office for National Statistics from **1988 onward** Monthly calculations of the current year are based on the latest CPI level, whereas previous years use their calendar year averages. **CPI estimates before 1988** are modelled based on data collected for the Retail Price Index (RPI).

The calculator uses the Consumer Price Index (CPI) as this is the measure used by the Government to set the Bank of England's target for inflation. An alternative credible measure, which is the ONS's lead measure of inflation, is the Consumer Price Index including Owner Occupiers' Housing Costs (CPIH).

Please note: the estimates in the calculator from 1949 onwards have been updated with revised CPI estimates from the ONS published in May 2022.

How the inflation calculator works

Our inflation calculator works for amounts between £1 and £1,000,000,000,000 (£1 trillion).

For example, imagine you want to know what goods and services costing £23 in 1975 would have cost in 1985:

The price index for 1975 = 17.78
The price index for 1985 = 44.6

The calculator increases the cost in 1975 by the change in prices between 1975 and 1985 with this formula:

$$Cost\ in\ 1985 = Cost\ in\ 1975 \times \frac{1985\ price\ index}{1975\ price\ index}$$

$$£\ 57.68 = £\ 23 \times \frac{44.6}{17.78}$$

So the cost in 1985 of the same goods and services has risen to £57.68.

Average inflation

The inflation calculator can also be used to calculate the average yearly inflation rate between two years or months (current year only). The formula for this, again using the example of 1975 to 1985, is:

$$Average\ inflation = \left(\left(\left(\frac{1985\ price\ index}{1975\ price\ index}\right)^{0.1}\right) - 1\right) \times 100$$

The answer is:

$$9.6\% = \left(\left(\left(\frac{44.6}{17.78}\right)^{0.1}\right) - 1\right) \times 100$$

This looks a bit complicated, but it just shows that on average prices rose by 9.6% a year between 1975 and 1985. By the way, “0.1” means that the change in prices is ‘raised to the power of one tenth’ to calculate the average inflation rate over ten years. If you want to use a different period of time, divide 1 by the number of years between the years of interest.

Deflation

If prices fell between the two years you put into the calculator, average inflation will be negative. This is called deflation.

For example, say you input the dates 1920 and 1933. The calculator reveals that inflation averaged -3.5%, because prices fell in almost every year between 1920 and 1933.

How we created our calculator

Our inflation calculator is designed for illustrative and general reference purposes only.

The calculations are approximate and only give a rough guide to the buying power of the pound for goods and services purchased in the UK.

We use several sources to create our calculator. For dates from 1750 until 1948 we use the Office for National Statistics' (ONS) **Composite Price Index** Before 1947 no single price index exists so the ONS use price data linked together from several different published sources. We use the ONS's estimates of the **Consumer Price Index** from 1949 onwards, which we use to update our calculator each year.

For dates between 1209 to 1750, we use the **cost of living index** kindly supplied by Professor Greg Clark.

There are a number of other price indices available. You can find some alternatives in our **A millennium of macroeconomic data spreadsheet** and Professor Clark's study **The Macroeconomic Aggregates for England 1209-1869**

The website **measuringworth.com** has a calculator based on different measures of comparative value such as the Gross Domestic Product (GDP) deflator, average earnings, and GDP per head. These measures may be more useful depending on what you're trying to do. For example, a calculator based on average earnings might be better if you want to compare wages, income or wealth over time.

Accuracy of inflation data

Over long periods, the definitions of goods and services included in the price index have changed. For example, a family's food and clothes today are very different to those of a typical family a hundred years ago.

Changes in household spending also reflect higher incomes and the wider range of goods and services available to buy today. These new goods and services are included in today's price index, but not in earlier versions.

Overall, these features of the data mean that comparisons of prices further back in time and over long periods are less accurate than comparisons over short periods in recent years.

Inflation and interest rates explainers

Borrowing calculator

Savings calculator

Shillings to pounds converter