

Overview

The Consumer Price Index (CPI) is a measure of the costs of purchasing the [representative bundle of goods and services](#) consumed by urban households during a period relative to a base period. It is used to perform three important functions: (i) determine whether general prices are higher, lower or stable over time, (ii) calculate the annual rate of inflation, and (iii) convert nominal values to real. (This conversion allows us to adjust prices, wages and incomes for differences in the general level of prices across time periods.)

- Currently, the [Bureau of Labor Statistics \(BLS\)](#) identifies the base period of price reference for the CPI as 1982-84. So, the CPI for 1982 to 84 is set at 100. The BLS then calculates price indexes for other periods. If the cost of purchasing the basket during a period is greater than the base, the CPI is proportionally greater than 100. This indicates how much higher the general level of prices in the specified period is relative to the base. Correspondingly, a CPI of less than 100 indicates how much lower the general level of prices during the specified period is relative to the reference period.
- The CPI is also used to calculate the annual rate of inflation. The annual rate of inflation is the percent change in the general level of prices during a year. Mathematically, it is:
$$\left[\frac{(\text{CPI Period 2} - \text{CPI Period 1})}{\text{CPI Period 1}} \right] \times 100$$
, expressed as a percentage.
- The CPI is also often used to convert nominal values into real. For example, if we want to convert a price from an earlier period (Price in period 1) to the current price level (Price in period 1 measured in today's prices or period 2 average prices), the formula for doing so would be:

$$\text{P1 measured in today's prices} = \text{Price in period 1} \times \frac{\text{CPI in Period 2}}{\text{CPI in Period 1}}$$

Student Resources

What is the Consumer Price Index (CPI)?

1. To see data on the CPI, visit [CPI-U from 1913 to present \(Base year is chained; 1982-1984 = 100\)](#).
2. Find out "[What is a Dollar Worth](#)" by visiting the Federal Reserve Bank of Minneapolis.

3. The [Consumer Price Indexes \(CPI\) program of The United States Bureau of Labor](#) produces monthly data on changes in the prices paid by urban consumers for a representative basket of goods and services. Visit the BLS website to get interesting answers to [frequently asked questions](#).
4. Visit the [California Department of Finance](#) website to see examples of how the CPI data are used in three important ways by a state government, its unions and different groups.
5. **Media, Media, Media – What is the CPI?** Test your understanding of what the CPI is and its applications. Answer the following questions based on a news release that the CPI for August of 2006 was 203 compared to 195 in August of 2005.
 - i) Compared to 2005, the cost of purchasing the typical basket of goods and services consumed by urban households in 2006 was:
 - a) higher
 - b) the same
 - c) lower
 - ii) The annual rate of inflation between August of 2005 and 2006 was
 - a) 8 percent
 - b) 4.1 percent
 - c) 0.041 percent
 - iii) The price of a gallon of gas was \$3.00 in August of 2006 compared to \$1.25 in 1980. The CPI in 1980 was 82.4 compared to a CPI of 203 in 2006. What was the price of a gallon of gas in 1980 measured in terms of the 2006 price level?
 - a) \$0.51 per gallon
 - b) \$1.21 per gallon
 - c) \$3.08 per gallon