

Statistical Indices

A statistical index is a number or a weighted mean that is used to show how the individual statistics or components of an index have changed as a whole. Indices are used to quantify trends. Most indices use a base value of 100 to make the figures easier to work with. Indices are used to report on numerous variables, including consumer prices, stock prices, customer satisfaction and human development.

Some common examples of statistical indices are The Consumer Price Index, IQ, S&P TSX Composite Index, S&P 500, UV Index, Humidex, Air Quality Index and the BMI.

The Consumer Price Index

The Consumer Price Index (CPI) is a measure of the changes in price of a group of consumer goods and services used by Canadians, such as milk, telephone services, and transportation. It is a widely used indicator of inflation, which is the overall increase in prices over a period of time. The CPI was established in the early 1900s using the prices of 29 food items in major cities. Now, there are more than 600 items on the index.

Each item is given a weighting factor based on the average annual spending per household on the item. The table below shows the current CPI weighting factors and those for 2002. Note, the current CPI uses 2002 as its base value of 100.

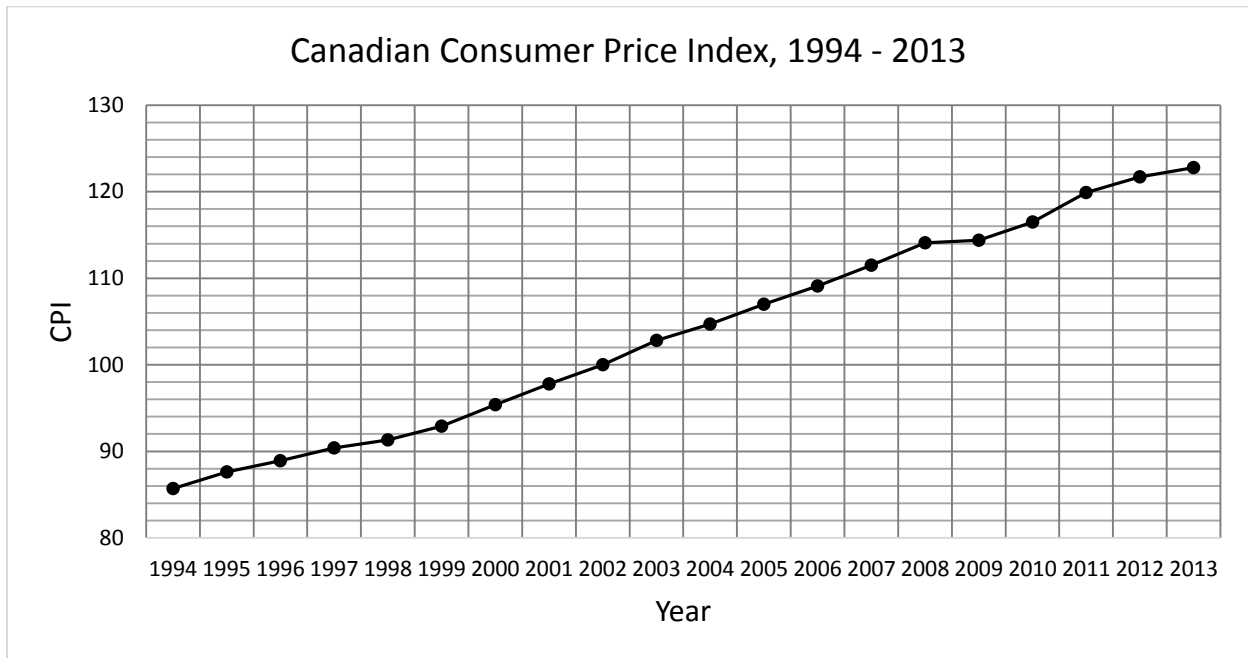
Item	Weighting Factor	
	Current	2002
Food	16.60	17.04
Shelter	26.26	26.20
Household operations, furnishings and equipment	12.66	11.10
Clothing and footwear	5.82	5.36
Transportation	19.98	19.88
Health and personal care	4.93	4.73
Recreation, education and reading	10.96	12.20
Alcoholic beverages and tobacco products	2.79	3.07

1. Provide possible explanations as to why the weighting factor for alcoholic beverages and tobacco products has decreased since 2002.

2. Food is more necessary than transportation. Why might it have a lower weighting factor than transportation?

3. How would the effects of a 10% increase in the overall cost of clothing and footwear compare to a 10% increase in the overall cost of food with respect to the CPI?

The graph below shows the value of the CPI since 2002.



*The CPI in 2002 was 100.

1. By what percent did prices increase between 2002 and 2013?
2. Assuming that the CPI approximates inflation, what should someone who was earning a \$55,000 salary in 2002 be earning today?

The **real value** of an investment is the value of an investment less the effects of inflation.

3. If you invested \$2,000 in 2002, and your investment was worth \$2,500 in 2013, what was the **real value** of your investment at this time?

4. Using your answer from above, explain whether or not your investment is “ahead of inflation”.