

ECONOMIC SKILLS LAB**Calculating a Consumer Price Index**

A price index can be constructed for a variety of purposes, such as for consumer prices, producer prices, stock prices, and so forth. In this exercise you will construct a price index for compact automobiles during the period 1984 through 1990. You can do this by using the following formula:

$$\text{Price Index} = \text{Price in any given year} \div \text{Price in base year} \times 100$$

Using 1985 as your base year, complete the following chart.

Year	Price of Compact	Car Price Index (1985 = 100)
1984	\$ 7,200	_____
1985	\$ 8,000	$8,000 \div 8,000 \times 100 = 100$
1986	\$ 8,800	_____
1987	\$ 9,200	_____
1988	\$10,000	_____
1989	\$12,000	_____
1990	\$12,500	_____

Questions for Understanding

1. Why is the base year always equal to 100?

2. What was the price increase from 1985 to 1988?

(a) in dollars? _____

(b) in percent? _____

Weaknesses of the CPI. Although many people follow the CPI as a way of learning what is happening to the cost of living, its index numbers can be misleading. One reason is that the quality of items are often improved over previous years. Although people pay more for the improved goods and services, they are also receiving more for their money. For example, the cost of CD records are generally higher than the old LP discs. Yet the quality of the sound on the newer records make them a different product. So that even though consumers are

paying more for the item, they are receiving more in exchange.

The way in which items are weighted can also distort the CPI. That is, weights are assigned on the basis of the way consumers spent their money *during the base years*. But suppose that spending patterns change, and people are now buying twice as many shoes as before. That being the case, the cost of living as reflected in the CPI would be understated. (Because it failed to include the increased cost of shoes).

ECONOMIC SKILLS LAB**Calculating the Deposit Multiplier**

When money is deposited in the banking system for the first time, it can lead to a series of loans and deposits that result in an expansion of the money supply. The amount of an expansion that the deposit of "new money" will create is limited by the reserve requirements under which the banking system is operating at the time. One can calculate this amount simply by multiplying the deposit of "new money" by the *deposit multiplier*. For example, with a deposit multiplier of 6 and deposits of new money of \$10,000, an expansion of \$60,000 in the nation's money supply would be possible.

The *deposit multiplier* is the reciprocal of the reserve ratio. For example, with a reserve ratio of 5 percent the deposit multiplier would be 20 (because $5\% = 5/100 = 1/20$, and the reciprocal of $1/20$ is 20).

1. Complete the table below by filling in the missing numbers.

Reserve requirements	Expressed as a fraction	Reciprocal	New money in banking system	Maximum expansion possible
10%	10/100	100/10	\$1,000,000	\$10,000,000
20%	_____	_____	\$1,000,000	_____
25%	_____	_____	\$1,000,000	_____
33 $\frac{1}{3}$ %	_____	_____	\$1,000,000	_____
50%	_____	_____	\$1,000,000	_____

2. What happens to the ability of the banking system to increase the money supply as the reserve ratio increases?

3. An increase in the money supply results in price increases when industry cannot increase its output. Why is this so?

4. What recommendation regarding bank reserve requirements would you make when businesses are growing? When sales are down and businesses are cutting production?
