

# VISUAL 4.1

<b>Baby-sitting Price (Wage) Per Hour</b>	<b>Year</b>	<b>Movie Ticket Prices</b>
\$ .20	1945	\$ .25
.35	1950	.60
.40	1955	.75
.50	1960	1.00
.60	1965	1.25
.90	1970	1.75
1.50	1975	2.50
2.00	1980	3.00
2.50	1985	3.25
2.75	1990	5.00
3.00	1995	5.50
4.00	2000	6.00

## VISUAL 4.2 ▲ Calculating a Price Index

Good/Service	Amount Bought	Price in Year 1	Price in Year 2	Price in Year 3
Movie ticket	1	3.00	4.00	5.00
12 oz. can of soda	2	.40	.45	.55
Hamburger and fries	1	1.00	1.10	1.35
Candy bar (1.05 oz.)	2	.25	.35	.35
TOTAL		5.30	6.70	8.15

Market Basket = 1 movie ticket, 2 cans of soda, 1 hamburger and fries, and 2 candy bars

Market Basket in year 1 =  $(1 \times 3.00) + (2 \times .40) + (1 \times 1.00) + (2 \times .25) = 5.30$

Market Basket in year 2 =  $(1 \times 4.00) + (2 \times .45) + (1 \times 1.10) + (2 \times .35) = 6.70$

Market Basket in year 3 =  $(1 \times 5.00) + (2 \times .55) + (1 \times 1.35) + (2 \times .35) = 8.15$

**A price index has a base year to which prices in all other years are compared.**

Assume that year 1 is the base year.

Price index =  $(\text{market basket price in a given year} / \text{market price in the base year}) \times 100$

So, the price index for the base year is  $(5.30/5.30) \times 100 = 1 \times 100 = 100$

The price index for year 2 is  $(6.70/5.30) \times 100 = 126.4$

The price index for year 3 is  $(8.15/5.30) \times 100 = 153.8$

### Sample Price Index

Annual Indexes	
Year 1	100.0
Year 2	126.4
Year 3	153.8

The percent change in the overall price level from one year to another is called the **rate of inflation**. The inflation rate is stated as a percentage.

Year 2:

The inflation rate is 26.4%, calculated as follows:

$$[(126.4 - 100)/100] \times 100 = 26.4\%$$

Year 3:

The inflation rate is 21.7%, calculated as follows:

$$[(153.8 - 126.4)/126.4] \times 100 = 21.7\%$$

## VISUAL 4.3 ▲ The Consumer Price Index, 1975–2000

Annual Indexes		Inflation Rate
1975	53.8	
1976	56.9	
1977	60.6	
1978	65.2	
1979	72.6	
1980	82.4	
1981	90.9	
1982	96.5	
1983	99.6	
1984	103.9	
1985	107.6	
1986	109.6	
1987	113.6	
1988	118.3	
1989	124.0	
1990	130.7	
1991	136.2	
1992	140.3	
1993	144.5	
1994	148.2	
1995	152.4	
1996	156.9	
1997	160.5	
1998	163.0	
1999	166.6	
2000	172.2	

Source: U.S. Department of Labor, Bureau of Labor Statistics.

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## VISUAL 4.4 ▲ Answers to Visual 4.3

### The Consumer Price Index, 1975–2000

Annual Indexes		Inflation Rate
1975	53.8	Not applicable
1976	56.9	5.8%
1977	60.6	6.5%
1978	65.2	7.6%
1979	72.6	11.3%
1980	82.4	13.5%
1981	90.9	10.3%
1982	96.5	6.2%
1983	99.6	3.2%
1984	103.9	4.3%
1985	107.6	3.6%
1986	109.6	1.9%
1987	113.6	3.6%
1988	118.3	4.1%
1989	124.0	4.8%
1990	130.7	5.4%
1991	136.2	4.2%
1992	140.3	3.0%
1993	144.5	3.0%
1994	148.2	2.6%
1995	152.4	2.8%
1996	156.9	3.0%
1997	160.5	2.3%
1998	163.0	1.6%
1999	166.6	2.2%
2000	172.2	3.4%

Source: U.S. Department of Labor, Bureau of Labor Statistics.

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## VISUAL 4.5 ▲ Answers to Activity 4.1

1	2	3	4	5
Real Baby-sitting Price (Wage) Per Hour Adjusted to 1945 Prices	Nominal Baby-sitting Price (Wage) Per Hour	Year	Nominal Movie Ticket Prices	Real Movie Ticket Prices Adjusted to 1945 Prices
.20	\$.20	1945	\$.25	.25
.26	.35	1950	.60	.45
.27	.40	1955	.75	.50
.30	.50	1960	1.00	.61
.34	.60	1965	1.25	.71
.42	.90	1970	1.75	.81
.50	1.50	1975	2.50	.84
.44	2.00	1980	3.00	.66
.42	2.50	1985	3.25	.54
.38	2.75	1990	5.00	.69
.35	3.00	1995	5.50	.65
.42	4.00	2000	6.00	.63