CPI Example:

Use 1999 as the base year. Calculate the inflation rate between 2000 and 2001.

Year	Price of a Gun	Quantity of Guns	Price of Apple	Quantity of Apples
1999	$50	3	$.50	1000
2000	$60	3	$.75	900
2001	$70	1	$1.00	950

Steps:

Step 1: Choose a market basket:
Use the quantities purchased in 1999 (Note: you could have used the quantities from any of the years, so long as you held them constant):
Market Basket is $Q_G = 3$ and $Q_A = 1000$.

Step 2: Calculate CPI_{2000}:

$CPI_{2000} = [(P_{G2000} * Q_{G1999} + P_{A2000} * Q_{A1999})/(P_{G1999} * Q_{G1999} + P_{A1999} * Q_{A1999})] * 100$

$CPI_{2000} = [(\$60 * 3 + \$.75 * 1000)/(\$50 * 3 + \$.50 * 1000)] * 100$

$CPI_{2000} = (930/650) * 100 = 143.1$

Step 3: Calculate CPI_{2001}:

$CPI_{2001} = [(P_{G2001} * Q_{G1999} + P_{A2001} * Q_{A1999})/(P_{G1999} * Q_{G1999} + P_{A1999} * Q_{A1999})] * 100$

$CPI_{2001} = [(\$70 * 3 + \$1.00 * 1000)/(\$50 * 3 + \$.50 * 1000)] * 100$

$CPI_{2001} = (1210/650) * 100 = 186.2$

Step 4: Calculate inflation rate between 2000 and 2001:

Inflation Rate = $[(CPI_{2001} – CPI_{2000})/CPI_{2000})]*100$

Inflation Rate = $[(186.2 – 143.1)/143.1)]*100$

Inflation Rate = $[(43.1)/143.1)]*100$

Inflation Rate = 30.1%

Step 5: Interpret inflation rate:
On average, prices increased by 30.1% between 2000 and 2001.