

Problem Set # 3

Econ 1015

- 1) Government survey takers determine that typical family expenditures each month in the year designated as the base year are as follows:

20 pizzas at \$10 each
Rent of apartment, \$600 per month
Gasoline and car maintenance, \$100
Phone service, \$50

In the year following the base year, the survey takers determine that pizzas have risen to \$11 each, apartment rent is \$640, gasoline and maintenance have risen to \$120, and phone service has dropped in price to \$40.

- a) Find the CPI in the subsequent year and then compute the rate of inflation between the base year and the subsequent year.
b) The family's nominal income rose by 5 percent between the base year and subsequent year. Are they worse off or better off in terms of what their income is able to buy.
- 2) Here are the values of the CPI for each year from 1990 to 2000. For each year beginning in 1991, calculate the rate of inflation from the previous year. What happened to inflation rates over the 1990s?

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
1999	166.6
2000	172.2

- 3) On January 1, 2009, Albert invested \$1,000 at 6 percent interest per year for three years. The CPI on January 1, 2009 stood at 100. On January 1, 2010, the CPI was 105; on January 1, 2011 it was 110; and on January 1, 2012, the day Albert's investment matured, the CPI was 118. Find the real rate of interest earned by Albert in each of the three years and his total real return over the three-year period. Assume that interest earnings are reinvested each year and themselves earn interest.