Problem Set 2: Answer Key

Multiple Choice:

1) A
2) B
3) C
4) A
5) C
6) D
7) A
8) D
9) B
10) C
11) B
12) A

Calculations:

13) a. The price of pizza increased by 50 percent: (6 -4) / 4 * 100%= 50%

The price of clothing increased by 100 percent: (20 -10) /10* 100% =100%

The price of water increase by 50 percent: (3-2)/ 2 *100% = 50%

b. Since the price of clothing increased relatively more than did the price of pizza and water, people who purchase a lot of clothing and little water and pizza became worse off relative to people who purchase a lot of food and little clothing.

c. In 2002 the market basket cost $560: (4 *50) + (10*20) + (2*80) = 560

It cost $740 in 2003: (6*50) + (20*20) + (3*80) = 940

It costs$1250 in 2004: (5*50) + (30*20) + (5*80) = 1250

The CPI in year 2002 is: 560 / 560 *100 = 100
The CPI in year 2003 is: 940 / 560 *100 = 168 (rounded)
The CPI in year 2004 is: 1250/560 *100 = 223 (rounded)

The inflation rate in year 2004 from year 2003 = (223-168) / 168 *100% = 32.7% (rounded)

14) a. The movie ticket is worth $.25 × 177/17.7 = $2.50 in today's dollars

b. the cooks weekly wage is worth $15.00 × 177/13.1 = $202.67 in today's dollars

c. the gallon of gas is worth $.19 × 177/17.4 = $1.93 in today's dollars

Note: CPI in year 1 / CPI in year 2 = Price in year 1 / Price in year 2

15) a. The expected real interest rate was 4 percent.

Expected RI = NI- Expected Inflation Rate = 6%-2% = 4%

b. The actual real interest rate was 1 percent.

Actual RI = NI-Actual Inflation Rate = 6% - 5% = 1%

c. George, the banker, will lose because he receives less real interest income than he expected.
Jay and Joyce gain because they pay less real interest income than they expected.

Short Answer:

16) (1) Substitution bias. The CPI ignores the fact that consumers substitute toward goods that have become relatively less expensive. If some prices rise more than others, people will consume less of this good and the basket actually changes.

(2) Introduction of new goods. Because the CPI uses a fixed basket of goods, it does not take into account the increased well-being of consumers created when new goods are introduced.

(3) Unmeasured quality change. Not all quality changes can be measured. If the quality of good decreases, even the price the same, people are consuming less good for same amount of money. The value of a dollar falls.