ECON2103 Microeconomics

Chapter 1 Exercises

Solutions

1.

a. Real price of butter in year $t = \dfrac{CPI_{1980}}{CPI_t} \times$ nominal price of butter in year t.

	1980	1990	2000	2010
Real price of butter (1980 $)	$1.88	$1.26	$1.21	$1.32

The real price of butter decreased from $1.88 in 1980 to $1.21 in 2000, and it decreased from $1.88 in 1980 to $1.32 in 2010, although it did increase between 2000 and 2010.

b. Real price decreased by $0.67 ($1.88 − 1.21 = 0.67$) between 1980 and 2000. The percentage change in real price from 1980 to 2000 was therefore $(-0.67/1.88) \times 100\% = -35.6\%$. The decrease was $0.56 between 1980 and 2010 which, in percentage terms, is $(-0.56/1.88) \times 100\% = -29.8\%$.

c. To convert the CPI so that 1990 = 100, divide the CPI for each year by the CPI for 1990 and multiply that result by 100. Use the formula from answer (a) and the new CPI numbers below to find the real price of butter in 1990 dollars.

	1980	1990	2000	2010
New CPI	63.07	100	131.80	137.53
Real price of butter (1990 $)	$2.98	$1.99	$1.91	$2.09

d. Real price decreased by $1.07 ($2.98 − 1.91 = 1.07$). The percentage change in real price from 1980 to 2000 was therefore $(-1.07/2.98) \times 100\% = -35.9\%$. This answer is the same (except for rounding error) as in (b). It does not matter which year is chosen as the base year when calculating percentage changes in real prices.