

The National Film Association developed the Movie Price Index (MPI) in 1998 based upon the annual purchases of a typical moviegoer. Information on the market basket for the MPI and the prices for each of the goods in 1998, which is the base year, and in 2001 and 2002 is shown in the table below.

Good	Quantity	1998	2001	2002
Movie tickets	10	\$5	\$7	\$8
Tubs of popcorn	7	\$6	\$5	\$4
Boxes of candy	5	\$2	\$3	\$4
Sodas	11	\$2	\$3	\$3

Calculate the cost of the market basket in each year.

Year	Cost of Market Basket	Cost of Basket in Year t/ Cost of basket in base year	Movie Price Index (1998 = 100)
1998	_____	_____	_____
2001	_____	_____	_____
2002	_____	_____	_____

Construct the price index (Movie Price Index, MPI), using 1998 as the base year.

Compute the inflation rate for moviegoers in 2002.

For each of the following situations, describe which type of bias/problem referred to and why each would lead to an overstatement or understatement of the inflation rate:

- (i) The movie theater where the data were collected was remodeled at the end of 2001 and a new surround sound system was added.
- (ii) In the years since 1998, while candy prices increased popcorn prices dropped. As a result, moviegoers bought more and more popcorn while buying fewer boxes of candy.
- (iii) The concession stand started selling cappuccino in 2000. Cappuccino first sold for \$3, but currently sells for \$1 a cup and is a big hit with moviegoers.
- (iv) New adjustable seats with cup holders were installed.