

34. Incorrect. The answer is true not false. Base year for this index is 2012 when index = 100. You can convert \$800 to 2013 dollars by multiplying it by the price index for 2013 in 2012 dollars. Thus $\$800 \times (1.03) = \824 . Thus real income has fallen from \$824 to \$820 in 2013 dollars. Alternatively you could deflate 2013 back to 2012 dollars by dividing $820/1.03 = 796.12$. Again income has fallen. Thus it has fallen from \$800 to 796.12 in 2012 dollars.

In general, a price index for year i with base year b is the cost of a basket of goods in year i divided by the price of the same basket in year b multiplied by 100 to change it from a share into a percent, Designate the index by $(i/b) \times 100$. Thus if a basket cost 50 in year i and 25 in the base year, the price index for i in base year b is $(50/25) \times 100 = 200$. Prices are twice as high in year i as in year b . The CPI for the base year is $(\text{cost in base year}) / (\text{cost in base year}) \times 100 = 100$.

To use the index, divide by 100 to convert it back to a share. Thus, the index as a share for year i with base year b is b/i . Convert price in year i (P_i) back to the base year dollars P_b as follows:

$$P_b = \frac{P_i}{i/b}$$

Or convert base year dollars to year i dollars as follows:

$$P_b = P_i \frac{b}{i}$$