The primary use of a CPI is to compare prices for goods and services between two different years. For instance, you can use a CPI to determine the hourly rate in 2010 that was equivalent to $15 per hour in 1980.

Calculating Prices

If you know the price of an item or service in year A, then the price of that same item in year B is

$$\text{Price in year B} = \frac{\text{CPI in year B}}{\text{CPI in year A}}(\text{price in year A}).$$

Math.andYOU.com

You can access an inflation calculator at *Math.andYou.com.*

EXAMPLE 2 Calculating an Inflated Price

Your grandfather bought a section (640 acres) of land in Montana in 1942 for $5000. You inherited the property in 2010. The property was evaluated to be worth $2,400,000. Did the value of the property "keep up with inflation" or did it exceed inflation? Explain your reasoning.

SOLUTION

The CPI values for 1942 and 2010 were 16.3 and 218.1, respectively. If the value of the property had kept up with inflation, it would be worth

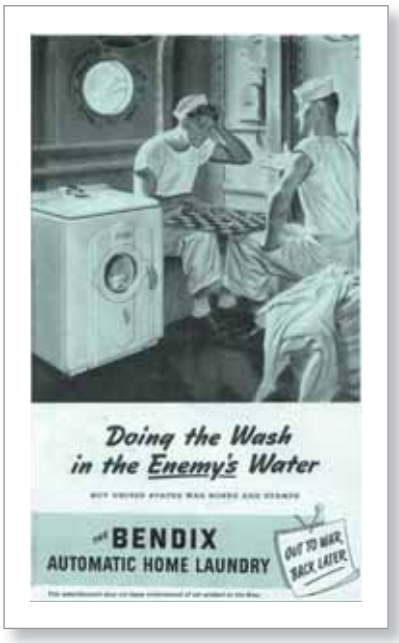
$$\begin{aligned}\text{Value in 2010} &= \frac{\text{CPI in 2010}}{\text{CPI in 1942}}(\text{value in 1942})\\ &= \frac{218.1}{16.3}(5000)\\ &\approx \$66{,}902.\end{aligned}$$

So, the value of the property far exceeded inflation.

Checkpoint

Help at Math.andYOU.com

In 1942, a Bendix automatic washing machine cost about $150. Suppose the cost of the washing machine kept up with inflation. What would it have cost in 2010?



1942 ad for Bendix washing machines