Solution 1.23E

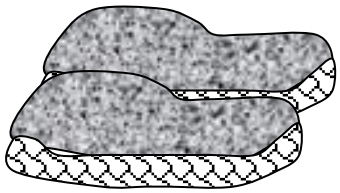
A man is considering buying a 12-oz steak for $3.15, or a 300-g steak for $2.95. The steak that is a better buy is to be determined.

Assumptions The steaks are of identical quality.

Analysis To make a comparison possible, we need to express the cost of each steak on a common basis. Let us choose 1 kg as the basis for comparison. Using proper conversion factors, the unit cost of each steak is determined to be

12 ounce steak:

$$\text{Unit Cost} = \left(\frac{\$3.15}{12\,\text{oz}}\right)\left(\frac{16\,\text{oz}}{1\,\text{lbm}}\right)\left(\frac{1\,\text{lbm}}{0.45359\,\text{kg}}\right) = \mathbf{\$9.26/kg}$$



300 gram steak:

$$\text{Unit Cost} = \left(\frac{\$2.95}{300\,\text{g}}\right)\left(\frac{1000\,\text{g}}{1\,\text{kg}}\right) = \mathbf{\$9.83/kg}$$

Therefore, the steak at the traditional market is a better buy.