**Solution 1.38**

Valley Rendering, Inc. is considering purchasing a new flotation system for grease recovery. The com­pany can finance a $150,000 system at 5% per year compound interest or 5.5% per year simple interest. If the total amount owed is due in a single payment at the end of 3 years, (*a*) which interest rate should the company select, and (*b*) how much is the differ­ence in interest between the two schemes?

*Solution:*

(a) Total due; compound interest = 150,000(1.05)(1.05)(1.05)

= $173,644

Total due; simple interest = P + Pni

= 150,000 + 150,000(3)(0.055)

= 150,000 + 24,750

= $174,750

Select the 5% compound interest rate

(b) Difference = 174,750 – 173,644

= $1106