

## EXAMPLE 4.10

The Scott and White Health Plan (SWHP) has purchased a robotized prescription fulfillment system for faster and more accurate delivery to patients with stable, pill-form medication for chronic health problems, such as diabetes, thyroid, and high blood pressure. Assume this high-volume system costs \$3 million to install and an estimated \$200,000 per year for all materials, operating, personnel, and maintenance costs. The expected life is 10 years. An SWHP biomedical engineer wants to estimate the total revenue requirement for each 6-month period that is necessary to recover the investment, interest, and annual costs. Find this semiannual  $A$  value both by hand and by spreadsheet, if capital funds are evaluated at 8% per year, using two different compounding periods:

**Rate 1.** 8% per year, compounded *semiannually*.

**Rate 2.** 8% per year, compounded *monthly*.