

### Solution 1.34

Durco Automotive needs a \$1 million balance in its contingency fund 3 years from now. The CFO (chief financial officer) wants to know how much to deposit now into Durco's high-yield investment account. Determine the amount if it grows at a rate of 20% per year (a) simple interest, and (b) compound interest.

*Solution:*

$$(a) \quad F = P + Pni$$

$$1,000,000 = P + P(3)(0.20)$$

$$1.60P = 1,000,000$$

$$P = \$625,000$$

$$(b) \quad P(1+i)(1+i)(1+i) = 1,000,000$$

$$P = 1,000,000 / [(1+0.20)(1+0.20)(1+0.20)]$$

$$= \$578,704$$