**Solution 1.33**

State University tuition and fees can be paid using one of two plans.

Early-bird: Pay total amount due *one year in ad­vance* and get a 10% discount.

On-time: Pay total amount due when classes start.

If the cost of tuition and fees is $20,000 per year, (a) how much is paid in the early-bird plan, and (b) at an interest rate of 6% per year, what is the equivalent amount of the savings compared to pay­ing when classes start, that is, 1 year later than the early-bird plan?

*Solution*:

(a) Early-bird: 20,000 – 20,000(0.10) = $18,000

(b) Equivalent future amount = 18,000(1 + 0.06)

= $19,080

Savings = 20,000 - $19,080

= $920