

### **Solution 1.11**

Abby purchased 100 shares of her dad's favorite stock for \$25.80 per share exactly 1 year ago, commission free. She sold it today for a total amount of \$2865. She plans to invest the entire amount in a different corporation's stock today, but must now pay a \$50 commission fee. If she plans to sell this new stock exactly 1 year from now and realize the same return as she has just made, what must be the total amount she receives next year? Include the commission fee as a part of the purchase price, but neglect any tax effects.

*Solution:*

$$\text{Extra amount received} = 2865 - 25.80 \times 100 = \$285$$

$$\begin{aligned} \text{Rate of return} &= 285/2580 \\ &= 0.110 \quad (11\%) \end{aligned}$$

$$\begin{aligned} \text{Total invested + fee} &= 2865 + 50 = \$2915 \\ \text{Amount required for 11\% return} &= 2915 \times 1.11 \\ &= \$3235.65 \end{aligned}$$