

**Exercise 12A-2** (30 minutes)

1. a. The lowest acceptable transfer price from the perspective of the selling division is given by the following formula:

$$\text{Transfer price} \geq \frac{\text{Variable cost}}{\text{per unit}} + \frac{\text{Total contribution margin on lost sales}}{\text{Number of units transferred}}$$

Because there is enough idle capacity to fill the entire order from the Hi-Fi Division, no outside sales are lost. And because the variable cost per unit is \$42, the lowest acceptable transfer price as far as the selling division is concerned is also \$42.

$$\text{Transfer price} \geq \$42 + \frac{\$0}{5,000} = \$42$$

- b. The Hi-Fi division can buy a similar speaker from an outside supplier for \$57. Therefore, the Hi-Fi Division would be unwilling to pay more than \$57 per speaker.

$$\text{Transfer price} \leq \text{Cost of buying from outside supplier} = \$57$$

- c. Combining the requirements of both the selling division and the buying division, the acceptable range of transfer prices in this situation is:

$$\$42 \leq \text{Transfer price} \leq \$57$$

Assuming that the managers understand their own businesses and that they are cooperative, they should be able to agree on a transfer price within this range and the transfer should take place.

- d. From the standpoint of the entire company, the transfer should take place. The cost of the speakers transferred is only \$42 and the company saves the \$57 cost of the speakers purchased from the outside supplier.

**Exercise 12A-2** (continued)

2. a. Each of the 5,000 units transferred to the Hi-Fi Division must displace a sale to an outsider at a price of \$60. Therefore, the selling division would demand a transfer price of at least \$60. This can also be computed using the formula for the lowest acceptable transfer price as follows:

$$\begin{aligned}\text{Transfer price} &\geq \$42 + \frac{(\$60 - \$42) \times 5,000}{5,000} \\ &= \$42 + (\$60 - \$42) = \$60\end{aligned}$$

- b. As before, the Hi-Fi Division would be unwilling to pay more than \$57 per speaker.
- c. The requirements of the selling and buying divisions in this instance are incompatible. The selling division must have a price of at least \$60 whereas the buying division will not pay more than \$57. An agreement to transfer the speakers is extremely unlikely.
- d. From the standpoint of the entire company, the transfer should not take place. By transferring a speaker internally, the company gives up revenue of \$60 and saves \$57, for a loss of \$3.