Managerial Accounting 8th Edition by Hartgraves & Morse
Practice Quiz Solutions

Chapter 11—Segment Reporting, Transfer Pricing, and Balanced Scorecard

1. Mid-Atlantic Communications, Inc. has two divisions (Individual and Business) and has the following information available for the current year:

Sales revenue—Individual	$4,000,000
Sales revenue —Business	6,000,000
Variable costs—Individual	2,200,000
Variable costs—Business	3,250,000
Direct fixed costs, Individual	500,000
Direct fixed costs, Business	650,000
Allocated fixed costs—Individual	350,000
Allocated fixed costs—Business	450,000
Unallocated common fixed costs	250,000

Mid-Atlantic Communications' Individual segment income is

a. $1,800,000
b. $2,750,000
c. $1,650,000
d. $ 950,000

Answer: *d*
Rationale:

Sales revenue	$4,000,000
Less: variable costs	2,200,000
Contribution margin	1,800,000
Less: direct fixed costs	500,000
Business division margin	1,300,000
Less: allocated segment costs	350,000
Business division income	$950,000

2. Refer to the previous question. The following information is available for the Business Division, which has two product lines (Land and Mobile):

Sales revenue—Land	$3,500,000
Sales revenue—Mobile	2,500,000
Variable costs—Land	1,850,000
Variable costs—Mobile	1,400,000
Direct fixed costs—Land	375,000
Direct fixed costs—Mobile	275,000
Allocated fixed costs—Land	275,000
Allocated fixed costs—Mobile	175,000
Unallocated common fixed costs	185,000

The product margin for Land is:

a. $1,100,000
b. $1,650,000
c. $ 925,000
d. $1,275,000

Answer: *d*
Rationale:

Sales revenue	$3,500,000
Less: variable costs	1,850,000
Contribution margin	1,650,000
Less: direct fixed costs	375,000
Land product margin	$1,275,000

3. In a first-level segment report for a company with two divisions, the sum of the division incomes for the two divisions is equal to:

a. The net income for the company
b. The net income for the company plus unallocated common fixed costs
c. The total contribution margin for the company less the sum of the direct fixed costs for the two divisions
d. The total company division margin plus the total allocated segment costs for the two divisions

Answer: *b*
Rationale: The total division income for the company less unallocated common fixed costs equals net income for the company; therefore, net income for the company plus unallocated common fixed costs equals total division income.

4. In the short-term, a strategic segment should be continued as long as:

a. Contribution margin is positive
b. Segment margin is positive
c. Segment income is positive
d. Net income is positive

Answer: *b*
Rationale: Segment "margin" is the relevant metric for measuring the short-term effects of decisions to continue or discontinue a segment; however, segment "income" is relevant for measuring the long-term effects of decisions to continue or discontinue.

5. Boler, Inc. is currently acquiring a key component from its sister company, Soler, Inc. at a transfer price of $15 per unit. Soler's variable cost of purchasing the unit is $6, and its fixed cost per unit is $5 per unit. Soler does not have any excess capacity and can sell all it makes to external customers at $15 per unit. Boler has been offered a price of $13 per unit for the component from another vendor and is insisting that Soler reduce its price to $13.

Which of the following statements below is *false* regarding this scenario?

a. Boler should not accept the outside offer because the variable cost of purchasing it inside is only $6 per unit.
b. Boler should purchase the unit externally because the internal cost of purchasing the unit internally is a variable cost of $6 per unit plus an opportunity cost of $9 per unit, or $15.
c. The company will be better off if Soler rejects Boler's demand and instead sells the units that Boler would buy to outside customers.
d. Since Soler is operating at full capacity and has other external customers ready to purchase additional units, the best transfer price is its regular market price.

Answer: *a*
Rationale: Market price is the best internal transfer price that will ensure the best result for the overall company when the selling division is operating at full capacity and it can sell all of that capacity to outside customers. In that case the internal division that is acquiring units from a sister division and the company will be better off if the acquiring division purchases from the outside supplier. In this case, market price is equal to variable cost plus opportunity cost, which is always the transfer price that will ensure the best result for the company.

6. Sorensen's Sod Supply Company has recently acquired a lawn sod company that grows turf grasses for lawns. Previously, Sorensen's was purchasing sod from other suppliers at 40 cents per square foot. The new sod division, which has substantial excess capacity, is able to produce grass sod at a cost of 25 cents per square foot, including direct materials and direct labor cost of 15 cents, variable overhead of 5 cents, and fixed overhead of 5 cents per square foot. The supply division manager argues that the transfer price should be no more than 25 cents per square foot.

What transfer price between the sod and the supply divisions will lead the manger of the supply division to act in a manner that will maximize company profits?

a. 40 cents
b. 20 cents
c. 25 cents
d. 35 cents

Answer: *b*
Rationale: The transfer price that will ensure that the company's profits are maximized is variable cost plus opportunity costs. Since the company is operating with substantial excess capacity, there is no opportunity cost. Hence, the transfer price that will ensure optimum company profits is 20 cents per square foot. The problem with this transfer price is that it results in a zero profit for the sod division on the product transferred internally, so the company may want to encourage a negotiated price (between 20 cents and 40 cents) that provides increased profits for both divisions.

7. LLG, Inc., which is a division of EPG, Inc., had sales of $3,000,000, total assets of $1,000,000, and net income of $250,000. Which of the following is not a correct calculation of ROI?

a. Net income / Total assets
b. (Sales / Total assets) x (Net income / Sales)
c. Return on sales x Investment turnover
d. Net income x Total assets

Answer: *d*
Rationale: ROI (or return on investment) is calculated as net income divided by total asset investments. It can also be calculated as return on sales (which is net income divided by sales) times asset investment turnover (which is sales divided by total asset investment). LLG's ROI is 25%, calculated as $250,000 / $1,000,000.

8. LLG, Inc., which is a division of EPG, Inc., had sales of $3,000,000, total assets of $1,000,000, and net income of $250,000. Senior management of EPG, Inc. has set a target minimum rate of return for LLG, Inc. of 16%.

Calculate LLG's residual income.

a. $90,000
b. $160,000
c. $230,000
d. None of the above

Answer: *a*
Rationale:
Net income – (Total assets x Minimum return percent) = Residual income
$250,000 – ($1,000,000 x 0.16) = $90,000

9. The balanced scorecard comprises several categories of performance measurements, which typically includes all but which of the following?

a. Financial
b. Employee morale
c. Customer satisfaction
d. Innovation

Answer: *b*
Rationale: The typical balanced scorecard includes measurements regarding financial performance, customer satisfaction, internal processes, and innovation and learning. While it would not be inappropriate to include measurements pertaining to employee morale, this is not a typical measurement in a balanced scorecard.

10. Which of the following is an accurate statement about balanced scorecards?

a. The balanced scorecard is a performance measurement system that includes multiple financial and operational measures related to a firm's goals and strategies.
b. Balanced scorecard measures should include both trailing and leading indicators
c. A balanced scorecard system of performance measurement can be a vehicle for translating strategy into action and establishing accountability for performance.
d. All of the above are accurate statements about balanced scorecards

Answer: *d*
Rationale: All of the statements are true. Balanced scorecards include both financial and non-financial operational metrics, a good balanced scorecard should address both past performance and indicators related to future, and it should correlate with the company's goals and strategies.