

**Chapter 20—Pricing and Other Product Management Decisions**

**Solutions to Practice Quiz**

1. Which of the following is likely to be a second-level process in a value chain for a bicycle manufacturer that sells to retail chains?
- a. Setting up equipment to make a specialty bike frame
  - b. Marketing products to chain stores
  - c. Placing a purchase order for metallic paint
  - d. Tire manufacturer

Answer: *b*

Rationale: Setting up equipment and placing a purchase order are “activities” not processes. A tire manufacturer is an “entity” link in a bicycle value chain that supplies tires to the bicycle manufacturer. Marketing products to chain stores would be an example of a “process” that a manufacturer would perform.

2. In a value chain analysis:
- a. The links of the chain are the various entities beginning with the producers of raw materials and ending with the final customer
  - b. Processes are collections of related activities intended to achieve a common purpose, such as procurement or production
  - c. Activities are the units of work that take place within the various processes, such as moving products from one work station to another
  - d. All of the above

Answer: *d*

3. In a cost-based pricing model, the mark-up percentage is determined by an equation that:
- a. Has the cost base in the denominator and any remaining costs plus the desired profit in the numerator
  - b. Has variable costs plus fixed costs in the denominator and total profit in the numerator
  - c. Always has only variable costs in the numerator
  - d. Always has desired profit as part of the denominator

Answer: a

Rationale: The cost-based markup percentage is determined by dividing the cost not included in the base plus the desired profit by the cost base. Hence, if the cost base (the denominator) is variable cost, the numerator would include fixed cost plus the desired profit. If the cost base (the denominator) is total cost (variable plus fixed), then the numerator would include only the desired profit.

4. Maple Manufacturing Co. makes profits with varying pricing structures, but it wants to determine the minimum markup percentage for all products based on manufacturing costs that will ensure that it does not fall below break-even point. It has estimated the following costs for the coming year for its planned production of all products.

Variable manufacturing costs	\$500,000
Fixed manufacturing costs	125,000
Selling expenses	110,000
Administrative expenses	130,000

The markup percentage required for Maple Manufacturing to break even is:

- a. 38.4%
- b. 260.0%
- c. 48.0%
- d. Cannot be determined unless desired profit is known

Answer: a

Rationale: Markup percentage based on manufacturing costs is calculated by dividing all non-manufacturing costs (Selling & Administrative) by total manufacturing costs:  $(\$110,000 + \$130,000) \div (\$500,000 + \$125,000) = 0.384$ , or 38.4%

5. Telecommunications, Inc. is considering producing a new hands-free device that will offer several voice-activated features. After much market research, it has determined that the appropriate target price for the new product is \$120. To achieve its normal minimum profit margin of 25%, Electronics must be able to produce the product at a maximum total cost of:

- a. \$102
- b. \$ 84
- c. \$ 90
- d. \$ 30

Answer: c

Rationale: If the device will sell for \$120 and the required profit is 25% of \$120, the total cost must not exceed 75% of \$120, or \$90 per unit.

6. Which of the following is not a typical target costing approach for keeping costs within the amount that allows the company to make the desired profit on a new product, while pricing the product at an amount acceptable to target customers?
- a. Reducing the quality of the product to meet the cost objective
  - b. Negotiating with potential vendors of materials and components
  - c. Changing engineering characteristics of the product, without sacrificing features or quality
  - d. Seek input from the entire value chain for improving the design of the product

Answer: *a*

Rationale: The idea behind target costing is to engage the entire value chain to try to provide the product to the end customer at a price and with the design and quality that the customer will accept. This requires seeking input from all parties up and down the value chain, as well as negotiating with (sometimes even strong arming) vendors. Target costing never seeks to meet the target cost by sacrificing the quality that the customer wants.

7. Kaizen costing:
- a. Deals with minimizing costs during the conception, design, and preproduction phases
  - b. Unlike target costing, focuses entirely on internal cost reductions
  - c. Is used only when a company was unable to achieve its target costing goals
  - d. Is similar to target costing, but it applies only to costing products that are already in production

Answer: *d*

Rationale: Kaizen costing uses techniques similar to those used in target costing during the design and development stage to achieve cost reductions once a product has already been developed and put into production.

8. Plunge, Inc. produces electronic devices such as computers and cell phones. It has recently introduced a solar-powered charger but realizes that to compete effectively in the future, it must be able to lower the cost of production and the selling price. The current cost per unit for producing the charger is \$28, and Plunge is estimating inflation on the solar-powered charger components and supplies purchased externally to be 1.25% in the coming year. In the most recent period, these items had a cost of \$12. Despite these cost increases, Plunge has adopted a Kaizen cost improvement model that targets a 7% cost decrease.

Plunge's Kaizen cost target (rounded to two decimal places) for the solar-powered charger is:

- a. \$26.37
- b. \$26.18
- c. \$28.15
- d. \$28.42

Answer: *b*

Rationale:  $[(\$12 \times 1.0125) + (\$28 - \$12)] \times 0.93 = \$26.18$

9. Against which of the following companies is a mail-order company such as Land's End likely to benchmark portions of its operations?
- a. L.L. Bean
  - b. Dell Computer
  - c. Walmart
  - d. All of the above

Answer: *d*

Rationale: The obvious answer is L.L. Bean because it is a major competitor; however, Land's End may also want to benchmark its shipping operations against a company like Dell, which is a major computer mail-order company, and possibly Walmart, which is well known for its effective relationships with vendors.

10. Which of the following is a key step in the benchmarking process?
- a. Understanding your own performance
  - b. Deciding what to benchmark
  - c. Studying others and learn from the data
  - d. All of the above are key steps in the benchmarking process

Answer: *d*

Rationale: The key steps generally included in the benchmarking process are: decide what to benchmark, plan the benchmark project, understand your own performance, study others, learn from the data, and take action.