

Problems from textbook 1

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Applications

8. In the current period, Blue Mountain Packers in Salmon Arm, British Columbia, had fixed costs of \$228,000 and a total cost of \$900,000 while maintaining a level of output of 6,720 units. Next period sales are projected to rise by 20%. What total cost should Blue Mountain Packers project?
9. Fred runs a designer candle-making business out of his basement. He sells the candles for \$15 each, and every candle costs him \$6 to manufacture. If his fixed costs are \$2,300 per month, what is his projected net income or loss next month, for which he forecasts sales of 225 units?
10. A college print shop leases an industrial Xerox photo copier for \$1,500 per month plus 1.5¢ for every page. Additional printing costs are estimated at 2¢ per page, which covers toner, paper, labour, and all other incurred costs. If copies are made for students at 10¢ each, determine the following:
 - a. How does net income change with every 100 copies sold?
 - b. What is the monthly net income if, on average, the shop makes 25,000 copies for students each month?
11. Gayle is thinking of starting her own business. Total fixed costs are \$19,000 per month and unit variable costs are estimated at \$37.50. From some preliminary studies that she completed, she forecasts sales of 1,400 units at \$50 each, 1,850 units at \$48 each, 2,500 units at \$46 each, and 2,750 units at \$44 each. What price would you recommend Gayle set for her products?
12. Last year, A Child's Place franchise had total sales of \$743,000. If its total fixed costs were \$322,000 and net income was \$81,000, what was its contribution rate?
13. What level of output would generate a net income of \$15,000 if a product sells for \$24.99, has unit variable costs of \$9.99, and total fixed costs of \$55,005?

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9. Ashley rebuilds old laptops as a home hobby business. Her variable costs are \$125 per laptop and she sells them for \$200. She has determined that her break-even point is 50 units per month. Determine her net income for a month in which she sells 60 units.
10. Burton Snowboards reported the following figures last week for its Custom V Rocker Snowboard:

Sales	\$70,000
Total Fixed Costs	\$19,000
Total Variable Costs	\$35,000
Total Costs	<u>\$54,000</u>
Net Income	\$16,000

If the above numbers represent 70% operational capacity, express the weekly break-even point in dollars as a percentage of maximum capacity.

11. Shardae is starting a deluxe candy apple business. The cost of producing one candy apple is \$4.50. She has total fixed costs of \$5,000. She is thinking of selling her deluxe apples for \$9.95 each.
 - a. Determine her unit break-even point at her selling price of \$9.95.
 - b. Shardae thinks her price might be set too high and lowers her price to \$8.95. Determine her new break-even point.
 - c. An advertising agency approaches Shardae and says people would be willing to pay the \$9.95 if she ran some "upscale" local ads. They would charge her \$1,000. Determine her break-even point.
 - d. If she wanted to maintain the same break-even units as determined in (a), what would the price have to be to pay for the advertising?
12. Robert is planning a wedding social for one of his close friends. Costs involve \$865 for the hall rental, \$135 for a liquor licence, \$500 for the band, and refreshments and food from the caterer cost \$10 per person. If he needs to raise \$3,000 to help his friend with the costs of his wedding, what price should he charge per ticket if he thinks he can fill the social hall to its capacity of 300 people?