***Managerial Accounting for Managers, 5e* (Noreen)**

**Chapter 2 Cost–Volume–Profit Relationships**

1) Incremental analysis is an analytical approach that focuses only on those revenues and costs that will not change as a result of a decision.

2) When expressed on a per unit basis, fixed costs can mislead decision makers into thinking of them as variable costs.

3) To estimate what the profit will be at various levels of activity, multiply the number of units to be sold above or below the break-even point by the unit contribution margin.

4) In a CVP graph (sometimes called a break-even chart), unit volume is represented on the horizontal (X) axis and dollars on the vertical (Y) axis.

5) On a CVP graph for a profitable company, the total expense line will be steeper than the total revenue line.

6) In a CVP graph, the anticipated profit or loss at any given level of sales is measured by the vertical distance between the total revenue line (sales) and the total fixed expense line.

7) A shift in the sales mix from low-margin items to high-margin items will decrease total profits even though total sales increase.

8) A shift in the sales mix from high-margin items to low-margin items can cause total profits to decrease even though total sales may increase.

9) In two companies making the same product and with the same total sales and total expenses, the contribution margin ratio will be lower in the company with a higher proportion of fixed expenses in its cost structure.

10) If the variable expense per unit decreases, and all other factors remain the same, the contribution margin ratio will increase.

11) The smaller the contribution margin ratio, the smaller the amount of sales required to cover a given amount of fixed expenses.

12) For a given level of sales, a low contribution margin ratio will produce more net operating income than a high contribution margin ratio.

13) If fixed expenses increase by $10,000 per year, then the sales needed to break even will generally increase by more than $10,000.

14) A decrease in the number of units sold will decrease the break-even point.

15) The break-even point in units can be obtained by dividing total fixed expenses by the unit contribution margin.

16) The break-even point can be determined by simply adding together all of the expenses from the income statement.

17) An increase in the number of units sold will decrease a company's break-even point.

18) For a capital intensive, automated company the break-even point will tend to be higher and the margin of safety will be lower than for a less capital intensive company with the same sales.

19) The total volume in sales dollars that would be required to attain a given target profit is determined by dividing the target profit by the contribution margin ratio.

20) Two companies with the same margin of safety in dollars will also have the same total contribution margin.

21) Fawn Company's margin of safety is $90,000. If the company's sales drop by $80,000, it will still have positive net operating income.

22) The margin of safety is the amount by which sales can decrease before losses are incurred by the company.

23) The margin of safety percentage is equal to the margin of safety in dollars divided by total contribution margin.

24) The degree of operating leverage in a company is smallest at the break-even point and increases as sales rise.

25) The degree of operating leverage is computed by dividing sales by the contribution margin.

26) A company with high operating leverage will experience a larger reduction in net operating income in a period of declining sales than a company with low operating leverage.

27) A shift in the sales mix from products with high contribution margin ratios toward products with low contribution margin ratios will raise the break-even point for the company as a whole.

28) If the contribution margin is not sufficient to cover fixed expenses:

A) total profit equals total expenses.

B) contribution margin is negative.

C) a loss occurs.

D) variable expenses equal contribution margin.

29) Which of the following statements is correct with regard to a CVP graph?

A) A CVP graph shows the maximum possible profit.

B) A CVP graph shows the break-even point as the intersection of the total sales revenue line and the total expense line.

C) A CVP graph assumes that total expense varies in direct proportion to unit sales.

D) A CVP graph shows the operating leverage as the gap between total sales revenue and total expense at the actual level of sales.

30) Which of the following is correct? The break-even point occurs on the CVP graph where:

A) total profit equals total expenses.

B) total profit equals total fixed expenses.

C) total contribution margin equals total fixed expenses.

D) total variable expenses equal total contribution margin.

31) Which of the following is true regarding the contribution margin ratio of a company that produces only a single product?

A) As fixed expenses decrease, the contribution margin ratio increases.

B) The contribution margin ratio multiplied by the selling price per unit equals the contribution margin per unit.

C) The contribution margin ratio will decline as unit sales decline.

D) The contribution margin ratio equals the selling price per unit less the variable expense ratio.

32) Mossfeet Shoe Corporation is a single product firm. The company is predicting that a price increase next year will not cause unit sales to decrease. What effect would this price increase have on the following items for next year?

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| --- | --- | --- |
|  | Contribution  Margin Ratio | Break-even  Point |
| A) | Increase | Decrease |
| B) | Decrease | Decrease |
| C) | Increase | No effect |
| D) | Decrease | No effect |

A) Choice A

B) Choice B

C) Choice C

D) Choice D

33) If a company increases its selling price by $2 per unit due to an increase in its variable labor cost of $2 per unit, the break-even point in units will:

A) decrease.

B) increase.

C) not change.

D) change but direction cannot be determined.

34) Break-even analysis assumes that:

A) Total revenue is constant.

B) Unit variable expense is constant.

C) Unit fixed expense is constant.

D) Selling prices must fall in order to generate more revenue.

35) Which of the following would not affect the break-even point?

A) number of units sold

B) variable expense per unit

C) total fixed expense

D) selling price per unit

36) A $2.00 increase in a product's variable expense per unit accompanied by a $2.00 increase in its selling price per unit will:

A) decrease the degree of operating leverage.

B) decrease the contribution margin.

C) have no effect on the break-even volume.

D) have no effect on the contribution margin ratio.

37) To obtain the dollar sales volume necessary to attain a given target profit, which of the following formulas should be used?

A) (Fixed expenses + Target net profit)/Total contribution margin

B) (Fixed expenses + Target net profit)/Contribution margin ratio

C) Fixed expenses/Contribution margin per unit

D) Target net profit/Contribution margin ratio

38) If sales volume increases and all other factors remain constant, then the:

A) contribution margin ratio will increase.

B) break-even point will decrease.

C) margin of safety will increase.

D) net operating income will decrease.

39) If the degree of operating leverage is 4, then a one percent change in quantity sold should result in a four percent change in:

A) unit contribution margin.

B) revenue.

C) variable expense.

D) net operating income.

40) Which of the following is an assumption underlying standard CVP analysis?

A) In multiproduct companies, the sales mix is constant.

B) In manufacturing companies, inventories always change.

C) The price of a product or service is expected to change as volume changes.

D) Fixed expenses will change as volume increases.

41) Rovinsky Corporation, a company that produces and sells a single product, has provided its contribution format income statement for November.

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| Sales (5,700 units) | $ | 319,200 |
| Variable expenses |  | 188,100 |
| Contribution margin |  | 131,100 |
| Fixed expenses |  | 106,500 |
| Net operating income | $ | 24,600 |

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If the company sells 5,300 units, its net operating income should be closest to:

A) $24,600

B) $2,200

C) $22,874

D) $15,400

42) Sorin Inc., a company that produces and sells a single product, has provided its contribution format income statement for January.

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| Sales (4,200 units) | $ | 155,400 |
| Variable expenses |  | 100,800 |
| Contribution margin |  | 54,600 |
| Fixed expenses |  | 42,400 |
| Net operating income | $ | 12,200 |

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If the company sells 4,600 units, its total contribution margin should be closest to:

A) $54,600

B) $59,800

C) $69,400

D) $13,362

43) Schister Systems uses the following data in its Cost-Volume-Profit analyses:

|  |  |  |
| --- | --- | --- |
|  |  | Total |
| Sales | $ | 400,000 |
| Variable expenses |  | 280,000 |
| Contribution margin |  | 120,000 |
| Fixed expenses |  | 100,000 |
| Net operating income | $ | 20,000 |

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What is total contribution margin if sales volume increases by 20%?

A) $80,000

B) $158,400

C) $200,000

D) $144,000

44) Kelchner Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
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| Sales (3,000 units) | $ | 180,000 |
| Variable expenses |  | 108,000 |
| Contribution margin |  | 72,000 |
| Fixed expenses |  | 62,400 |
| Net operating income | $ | 9,600 |

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The contribution margin ratio is closest to:

A) 67%

B) 40%

C) 33%

D) 60%

45) Nocum Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (3,000 units) | $ | 120,000 |
| Variable expenses |  | 90,000 |
| Contribution margin |  | 30,000 |
| Fixed expenses |  | 21,000 |
| Net operating income | $ | 9,000 |

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If sales decline to 2,900 units, the net operating income would be closest to:

A) $29,000

B) $1,000

C) $8,700

D) $8,000

46) Stauffer Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

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| Sales (8,000 units) | $ | 320,000 |
| Variable expenses |  | 192,000 |
| Contribution margin |  | 128,000 |
| Fixed expenses |  | 118,400 |
| Net operating income | $ | 9,600 |

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The variable expense ratio is closest to:

A) 60%

B) 40%

C) 67%

D) 33%

47) Carver Corporation produces a product which sells for $40. Variable manufacturing costs are $18 per unit. Fixed manufacturing costs are $5 per unit based on the current level of activity, and fixed selling and administrative costs are $4 per unit. A selling commission of 15% of the selling price is paid on each unit sold. The contribution margin per unit is:

A) $7

B) $17

C) $22

D) $16

48) Coultrap Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
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|  |  |  |
| Sales (3,000 units) | $ | 180,000 |
| Variable expenses |  | 117,000 |
| Contribution margin |  | 63,000 |
| Fixed expenses |  | 48,300 |
| Net operating income | $ | 14,700 |

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The contribution margin per unit is closest to:

A) $21.00

B) $60.00

C) $39.00

D) $4.90

49) Escareno Corporation has provided its contribution format income statement for June. The company produces and sells a single product.

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| Sales (8,400 units) | $ | 764,400 |
| Variable expenses |  | 445,200 |
| Contribution margin |  | 319,200 |
| Fixed expenses |  | 250,900 |
| Net operating income | $ | 68,300 |

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If the company sells 8,200 units, its total contribution margin should be closest to:

A) $301,000

B) $311,600

C) $319,200

D) $66,674

50) Decaprio Inc. produces and sells a single product. The company has provided its contribution format income statement for June.

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| --- | --- | --- |
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| Sales (8,800 units) | $ | 528,000 |
| Variable expenses |  | 290,400 |
| Contribution margin |  | 237,600 |
| Fixed expenses |  | 211,700 |
| Net operating income | $ | 25,900 |

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If the company sells 9,200 units, its net operating income should be closest to:

A) $27,077

B) $49,900

C) $36,700

D) $25,900

51) Warrix Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (3,000 units) | $ | 120,000 |
| Variable expenses |  | 90,000 |
| Contribution margin |  | 30,000 |
| Fixed expenses |  | 27,000 |
| Net operating income | $ | 3,000 |

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If sales increase to 3,020 units, the increase in net operating income would be closest to:

A) $800.00

B) $20.00

C) $600.00

D) $200.00

52) Thomason Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
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| Sales (1,000 units) | $ | 40,000 |
| Variable expenses |  | 30,000 |
| Contribution margin |  | 10,000 |
| Fixed expenses |  | 7,000 |
| Net operating income | $ | 3,000 |

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If the variable cost per unit increases by $1, spending on advertising increases by $2,000, and unit sales increase by 50 units, the net operating income would be closest to:

A) $450

B) $1,000

C) $2,150

D) $9,450

53) Duve Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
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| Sales (2,000 units) | $ | 40,000 |
| Variable expenses |  | 24,000 |
| Contribution margin |  | 16,000 |
| Fixed expenses |  | 11,200 |
| Net operating income | $ | 4,800 |

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If the selling price increases by $4 per unit and the sales volume decreases by 200 units, the net operating income would be closest to:

A) $7,200

B) $12,800

C) $10,400

D) $11,520

54) Ploeger Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

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| Sales (4,000 units) | $ | 240,000 |
| Variable expenses |  | 156,000 |
| Contribution margin |  | 84,000 |
| Fixed expenses |  | 81,900 |
| Net operating income | $ | 2,100 |

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The break-even point in dollar sales is closest to:

A) $234,000

B) $237,900

C) $156,000

D) $0

55) The following information pertains to Nova Co.'s cost-volume-profit relationships:

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| Breakeven point in units sold |  | 1,000 |
| Variable expenses per unit | $ | 500 |
| Total fixed expenses | $ | 150,000 |

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How much will be contributed to net operating income by the 1,001st unit sold?

A) $650

B) $500

C) $150

D) $0

56) Mishoe Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
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| Sales (1,000 units) | $ | 50,000 |
| Variable expenses |  | 32,500 |
| Contribution margin |  | 17,500 |
| Fixed expenses |  | 12,250 |
| Net operating income | $ | 5,250 |

The break-even point in unit sales is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) 0 units

B) 895 units

C) 700 units

D) 650 units

57) Stockmaster Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (8,000 units) | $ | 320,000 |
| Variable expenses |  | 192,000 |
| Contribution margin |  | 128,000 |
| Fixed expenses |  | 121,600 |
| Net operating income | $ | 6,400 |

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The margin of safety in dollars is closest to:

A) $6,400

B) $16,000

C) $121,600

D) $128,000

58) Hedman Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
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|  |  |  |
| Sales (9,000 units) | $ | 270,000 |
| Variable expenses |  | 202,500 |
| Contribution margin |  | 67,500 |
| Fixed expenses |  | 63,750 |
| Net operating income | $ | 3,750 |

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The margin of safety percentage is closest to:

A) 75%

B) 1%

C) 6%

D) 24%

59) Cassius Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (7,000 units) | $ | 210,000 |
| Variable expenses |  | 136,500 |
| Contribution margin |  | 73,500 |
| Fixed expenses |  | 67,200 |
| Net operating income | $ | 6,300 |

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The number of units that must be sold to achieve a target profit of $31,500 is closest to:

A) 42,000 units

B) 16,400 units

C) 35,000 units

D) 9,400 units

60) Goodman Corporation has sales of 3,000 units at $80 per unit. Variable costs are 35% of the sales price. If total fixed costs are $66,000, the degree of operating leverage is:

A) 0.79

B) 0.93

C) 2.67

D) 1.73

61) Jilk Inc.'s contribution margin ratio is 58% and its fixed monthly expenses are $36,000. Assuming that the fixed monthly expenses do not change, what is the best estimate of the company's net operating income in a month when sales are $103,000?

A) $23,740

B) $59,740

C) $67,000

D) $7,260

62) Gayne Corporation's contribution margin ratio is 12% and its fixed monthly expenses are $84,000. If the company's sales for a month are $738,000, what is the best estimate of the company's net operating income? Assume that the fixed monthly expenses do not change.

A) $565,440

B) $654,000

C) $88,560

D) $4,560

63) Creswell Corporation's fixed monthly expenses are $29,000 and its contribution margin ratio is 56%. Assuming that the fixed monthly expenses do not change, what is the best estimate of the company's net operating income in a month when sales are $95,000?

A) $12,800

B) $24,200

C) $53,200

D) $66,000

64) Northern Pacific Fixtures Corporation sells a single product for $28 per unit. If variable expenses are 65% of sales and fixed expenses total $9,800, the break-even point is: **(Round your intermediate calculations to 2 decimal places.)**

A) $15,077

B) $18,200

C) $9,800

D) $28,000

65) Variable expenses for Alpha Corporation are 40% of sales. What are sales at the break-even point, assuming that fixed expenses total $150,000 per year:

A) $250,000

B) $375,000

C) $600,000

D) $150,000

66) Moyas Corporation sells a single product for $20 per unit. Last year, the company's sales revenue was $300,000 and its net operating income was $24,000. If fixed expenses totaled $96,000 for the year, the break-even point in unit sales was:

A) 12,000 units

B) 9,900 units

C) 15,000 units

D) 14,100 units

67) Sabv Corporation's break-even-point in sales is $675,000, and its variable expenses are 75% of sales. If the company lost $24,000 last year, sales must have amounted to:

A) $651,000

B) $579,000

C) $603,000

D) $471,000

68) Last year Easton Corporation reported sales of $480,000, a contribution margin ratio of 25% and a net loss of $16,000. Based on this information, the break-even point was:

A) $435,000

B) $544,000

C) $506,000

D) $600,000

69) Black Corporation's sales are $600,000, its fixed expenses are $150,000, and its variable expenses are 60% of sales. The margin of safety is:

A) $90,000

B) $190,000

C) $225,000

D) $240,000

70) Awtis Corporation has a margin of safety percentage of 20% based on its actual sales. The break-even point is $500,000 and the variable expenses are 60% of sales. Given this information, the actual profit is:

A) $65,000

B) $55,000

C) $50,000

D) $41,500

71) Tropp Corporation sells a product for $10 per unit. The fixed expenses are $420,000 per month and the unit variable expenses are 60% of the selling price. What sales would be necessary in order for Tropp to realize a profit of 10% of sales? **(Round your intermediate calculations to 2 decimal places.)**

A) $1,050,000

B) $945,000

C) $1,400,000

D) $840,000

72) Hopi Corporation expects the following operating results for next year:

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|  |  |  |  |
| Sales | $ | 400,000 |  |
| Margin of safety | $ | 100,000 |  |
| Contribution margin ratio |  | 75 | % |
| Degree of operating leverage |  | 4 |  |

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What is Hopi expecting total fixed expenses to be next year?

A) $75,000

B) $100,000

C) $200,000

D) $225,000

73) Iverson Corporation's variable expenses are 60% of sales. At a $400,000 sales level, the degree of operating leverage is 5. If sales increase by $40,000, the new degree of operating leverage will be (rounded):

A) 3.67

B) 2.86

C) 5.25

D) 5.00

74) Data concerning Dorazio Corporation's single product appear below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Per Unit | | | Percent of Sales | | |
| Selling price | $ | 160 |  |  | 100 | % | |
| Variable expenses |  | 48 |  |  | 30 | % | |
| Contribution margin | $ | 112 |  |  | 70 | % | |

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Fixed expenses are $87,000 per month. The company is currently selling 1,000 units per month. Management is considering using a new component that would increase the unit variable cost by $28. Since the new component would increase the features of the company's product, the marketing manager predicts that monthly sales would increase by 400 units. What should be the overall effect on the company's monthly net operating income of this change?

A) increase of $5,600

B) increase of $33,600

C) decrease of $5,600

D) decrease of $33,600

75) Kuzio Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Per Unit | | | Percent of Sales | | |
| Selling price | $ | 130 |  |  | 100 | % | |
| Variable expenses |  | 78 |  |  | 60 | % | |
| Contribution margin | $ | 52 |  |  | 40 | % | |

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The company is currently selling 6,000 units per month. Fixed expenses are $263,000 per month. The marketing manager believes that a $5,000 increase in the monthly advertising budget would result in a 140 unit increase in monthly sales. What should be the overall effect on the company's monthly net operating income of this change?

A) increase of $2,280

B) increase of $7,280

C) decrease of $5,000

D) decrease of $2,280

76) Data concerning Pellegren Corporation's single product appear below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Per Unit | | | Percent of Sales | | |
| Selling price | $ | 200 |  |  | 100 | % | |
| Variable expenses |  | 40 |  |  | 20 | % | |
| Contribution margin | $ | 160 |  |  | 80 | % | |

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Fixed expenses are $531,000 per month. The company is currently selling 4,000 units per month. The marketing manager would like to cut the selling price by $14 and increase the advertising budget by $35,000 per month. The marketing manager predicts that these two changes would increase monthly sales by 500 units. What should be the overall effect on the company's monthly net operating income of this change?

A) decrease of $18,000

B) increase of $38,000

C) decrease of $38,000

D) increase of $58,000

77) Warbler Gift's reported the following information for the sales of their single product:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Total | | | Per Unit | | |
| Sales | $ | 300,000 |  | $ | 10 |  | |
| Variable expenses |  | 180,000 |  |  | 6 |  | |
| Contribution margin |  | 120,000 |  | $ | 4 |  | |
| Fixed expenses |  | 100,000 |  |  |  |  | |
| Net operating income | $ | 20,000 |  |  |  |  | |

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Warbler's salesmen have proposed to decrease the selling price by 50 cents per unit. How many units will need to be sold for Warbler to earn at least the same net operating income? **(Round your intermediate calculations to 2 decimal places.)**

A) 5,715 units

B) 36,000 units

C) 34,286 units

D) 28,572 units

78) Data concerning Bazin Corporation's single product appear below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Per Unit | | | Percent of Sales | | |
| Selling price | $ | 100 |  |  | 100 | % | |
| Variable expenses |  | 20 |  |  | 20 | % | |
| Contribution margin | $ | 80 |  |  | 80 | % | |

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Fixed expenses are $384,000 per month. The company is currently selling 6,000 units per month. The marketing manager would like to introduce sales commissions as an incentive for the sales staff. The marketing manager has proposed a commission of $9 per unit. In exchange, the sales staff would accept a decrease in their salaries of $46,000 per month. (This is the company's savings for the entire sales staff.) The marketing manager predicts that introducing this sales incentive would increase monthly sales by 500 units. What should be the overall effect on the company's monthly net operating income of this change?

A) increase of $27,500

B) decrease of $64,500

C) increase of $41,500

D) increase of $507,500

79) Chovanec Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Per Unit | | | Percent of Sales | | |
| Selling price | $ | 170 |  |  | 100 | % | |
| Variable expenses |  | 68 |  |  | 40 | % | |
| Contribution margin | $ | 102 |  |  | 60 | % | |

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Fixed expenses are $521,000 per month. The company is currently selling 7,000 units per month. Management is considering using a new component that would increase the unit variable cost by $6. Since the new component would increase the features of the company's product, the marketing manager predicts that monthly sales would increase by 500 units. What should be the overall effect on the company's monthly net operating income of this change?

A) decrease of $48,000

B) decrease of $6,000

C) increase of $48,000

D) increase of $6,000

80) How much will a company's net operating income change if it undertakes an advertising campaign given the following data:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| Cost of advertising campaign | $ | 25,000 |  |
| Variable expense as a percentage of sales |  | 42 | % |
| Increase in sales | $ | 60,000 |  |

A) $200 increase

B) $25,200 increase

C) $15,000 increase

D) $9,800 increase

81) Data concerning Kardas Corporation's single product appear below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Per Unit | | | Percent of Sales | | |
| Selling price | $ | 140 |  |  | 100 | % | |
| Variable expenses |  | 28 |  |  | 20 | % | |
| Contribution margin | $ | 112 |  |  | 80 | % | |

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The company is currently selling 8,000 units per month. Fixed expenses are $719,000 per month. The marketing manager believes that a $20,000 increase in the monthly advertising budget would result in a 180 unit increase in monthly sales. What should be the overall effect on the company's monthly net operating income of this change?

A) decrease of $160

B) increase of $20,160

C) decrease of $20,000

D) increase of $160

82) Cobble Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Per Unit | | | Percent of Sales | | |
| Selling price | $ | 160 |  |  | 100 | % | |
| Variable expenses |  | 48 |  |  | 30 | % | |
| Contribution margin | $ | 112 |  |  | 70 | % | |

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Fixed expenses are $499,000 per month. The company is currently selling 5,000 units per month. The marketing manager would like to cut the selling price by $13 and increase the advertising budget by $33,000 per month. The marketing manager predicts that these two changes would increase monthly sales by 900 units. What should be the overall effect on the company's monthly net operating income of this change?

A) increase of $56,100

B) decrease of $8,900

C) increase of $99,300

D) decrease of $56,100

83) Sannella Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Per Unit | | | Percent of Sales | | |
| Selling price | $ | 220 |  |  | 100 | % | |
| Variable expenses |  | 66 |  |  | 30 | % | |
| Contribution margin | $ | 154 |  |  | 70 | % | |

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Fixed expenses are $991,000 per month. The company is currently selling 8,000 units per month. The marketing manager would like to introduce sales commissions as an incentive for the sales staff. The marketing manager has proposed a commission of $11 per unit. In exchange, the sales staff would accept a decrease in their salaries of $74,000 per month. (This is the company's savings for the entire sales staff.) The marketing manager predicts that introducing this sales incentive would increase monthly sales by 200 units. What should be the overall effect on the company's monthly net operating income of this change?

A) increase of $1,246,600

B) increase of $14,600

C) decrease of $133,400

D) increase of $71,800

84) Wenstrom Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Selling price per unit | $ | 130.00 |
| Variable expense per unit | $ | 41.60 |
| Fixed expense per month | $ | 109,616 |

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The break-even in monthly dollar sales is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $342,550

B) $204,455

C) $109,616

D) $161,200

85) Borich Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Selling price per unit | $ | 150.00 |
| Variable expense per unit | $ | 73.50 |
| Fixed expense per month | $ | 308,295 |

The break-even in monthly unit sales is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) 2,055

B) 4,030

C) 4,194

D) 3,426

86) Data concerning Follick Corporation's single product appear below:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Selling price per unit | $ | 110.00 |
| Variable expense per unit | $ | 30.80 |
| Fixed expense per month | $ | 321,552 |

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The break-even in monthly dollar sales is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $1,148,400

B) $638,851

C) $321,552

D) $446,600

87) Wimpy Inc. produces and sells a single product. The selling price of the product is $150.00 per unit and its variable cost is $58.50 per unit. The fixed expense is $366,915 per month.

The break-even in monthly dollar sales is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $601,500

B) $366,915

C) $636,408

D) $940,808

88) Given the following data:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Selling price per unit | $ | 2.00 |
| Variable production cost per unit | $ | 0.30 |
| Fixed production cost | $ | 3,000 |
| Sales commission per unit | $ | 0.20 |
| Fixed selling expenses | $ | 1,500 |

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The break-even point in dollars is: **(Round your intermediate calculations to 2 decimal places.)**

A) $6,000

B) $4,500

C) $2,647

D) $4,000

89) Hevesy Inc. produces and sells a single product. The selling price of the product is $200.00 per unit and its variable cost is $80.00 per unit. The fixed expense is $300,000 per month. The break-even in monthly unit sales is closest to:

A) 2,500

B) 1,500

C) 3,750

D) 2,583

90) Singapore Candy Cane Corporation is a single product firm with the following cost structure for next year:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Selling price per unit | $ | 1.20 |
| Variable expenses per unit | $ | 0.72 |
| Total fixed expenses for the year | $ | 64,800 |

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What is the company's break-even point next year in sales dollars? **(Round your intermediate calculations to 2 decimal places.)**

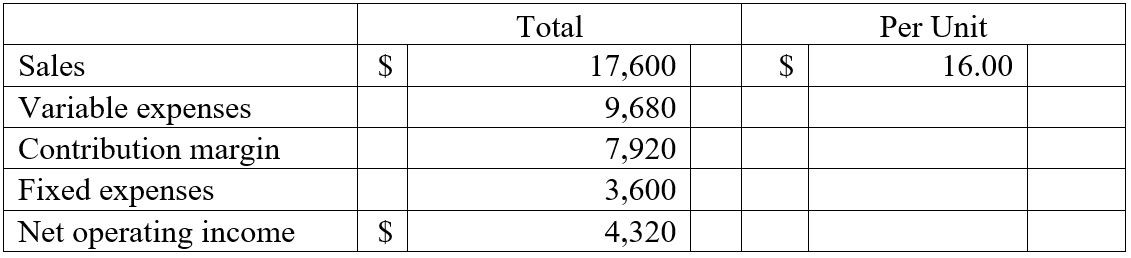
A) $90,000

B) $108,000

C) $135,000

D) $162,000

91) Bear Publishing sells a nature guide. The following information was reported for a typical month:



What is Bear's current break-even point in unit and dollars?

A) 1,100 units and $17,600

B) 1,100 units and $8,000

C) 8,000 units and $500

D) 500 units and $8,000

92) Mason Corporation's selling price was $20 per unit. Fixed expenses totaled $54,000, variable expenses were $14 per unit, and the company reported a profit of $9,000 for the year. The break-even point for Mason Corporation is:

A) 10,500 units

B) 4,500 units

C) 8,500 units

D) 9,000 units

93) Derst Inc. sells a particular textbook for $140. Variable expenses are $25 per book. At the current volume of 6,000 books sold per year the company is just breaking even. Given these data, the annual fixed expenses associated with the textbook total:

A) $400,000

B) $690,000

C) $840,000

D) $150,000

94) Data concerning Buchenau Corporation's single product appear below:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Selling price per unit | $ | 150.00 |
| Variable expense per unit | $ | 34.50 |
| Fixed expense per month | $ | 466,620 |

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The break-even in monthly unit sales is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) 3,111

B) 6,892

C) 4,040

D) 13,525

95) Sufra Corporation is planning to sell 100,000 units for $8.00 per unit and will break even at this level of sales. Fixed expenses will be $300,000. What are the company's variable expenses per unit?

A) $5.00

B) $4.00

C) $3.00

D) $4.50

96) Mio Canoe Livery rents canoes and transports canoes and customers to and from their canoe trip on a local river. The trip is priced at $20 per person and has a CM ratio of 30%. Mio's fixed expenses are $84,000. Last year, sales were $400,000 and profit was $36,000. How many units need to be sold to break-even, and how many need to be sold to earn a profit of $42,000?

A) 1,800 and 2,100

B) 6,000 and 8,143

C) 14,000 and 21,000

D) 4,200 and 6,300

97) A company makes a single product that it sells for $16 per unit. Fixed costs are $76,800 per month and the product has a contribution margin ratio of 40%. If the company's actual sales are $224,000, its margin of safety is:

A) $32,000

B) $96,000

C) $128,000

D) $192,000

98) The following data are available for the Phelps Corporation for a recent month:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Product A | | | Product B | | | | Product C | | | Total | | |
| Sales | $ | 150,000 |  | | $ | 130,000 |  | | $ | 90,000 | | $ | 370,000 | |
| Variable expenses |  | 91,000 |  | |  | 104,000 |  | |  | 27,000 | |  | 222,000 | |
| Contribution margin | $ | 59,000 |  | | $ | 26,000 |  | | $ | 63,000 | |  | 148,000 | |
| Fixed expenses |  |  |  | |  |  |  | |  |  | |  | 55,000 | |
| Net operating income |  |  |  | |  |  |  | |  |  | | $ | 93,000 | |

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The break-even sales for the month for the company is closest to:

A) $91,667

B) $203,000

C) $148,000

D) $137,500

99) Ferkil Corporation manufacturers a single product that has a selling price of $100 per unit. Fixed expenses total $225,000 per year, and the company must sell 5,000 units to break even. If the company has a target profit of $67,500, sales in units must be:

A) 6,000 units

B) 5,750 units

C) 7,925 units

D) 6,500 units

100) Corporation X sold 25,000 units of product last year. The contribution margin per unit was $2, and fixed expenses totaled $40,000 for the year. This year fixed expenses are expected to increase to $45,000, but the contribution margin per unit will remain unchanged at $2. How many units must be sold this year to earn the same net operating income as was earned last year?

A) 22,500

B) 27,500

C) 35,000

D) 2,500

101) Data concerning Bedwell Enterprises Corporation's single product appear below:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Selling price per unit | $ | 160.00 |
| Variable expenses per unit | $ | 65.60 |
| Fixed expense per month | $ | 387,040 |

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The unit sales to attain the company's monthly target profit of $17,000 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) 6,159

B) 4,280

C) 2,525

D) 4,321

102) The contribution margin ratio of Mountain Corporation's only product is 52%. The company's monthly fixed expense is $296,400 and the company's monthly target profit is $7,000. The dollar sales to attain that target profit is closest to:

A) $570,000

B) $157,768

C) $583,462

D) $154,128

103) Hettrick International Corporation's only product sells for $120.00 per unit and its variable expense is $52.80. The company's monthly fixed expense is $396,480 per month. The unit sales to attain the company's monthly target profit of $13,000 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) 7,755

B) 6,093

C) 5,753

D) 3,412

104) Caneer Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Selling price per unit | $ | 240.00 |
| Variable expenses per unit | $ | 81.60 |
| Fixed expense per month | $ | 997,920 |

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The unit sales to attain the company's monthly target profit of $44,000 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) 7,896

B) 12,769

C) 6,578

D) 4,341

105) Product Y sells for $15 per unit, and has variable expenses of $9 per unit. Fixed expenses total $300,000 per year. How many units of Product Y must be sold each year to yield an annual profit of $90,000?

A) 50,000 units

B) 65,000 units

C) 15,000 units

D) 43,333 units

106) Logsdon Corporation produces and sells a single product whose contribution margin ratio is 63%. The company's monthly fixed expense is $720,720 and the company's monthly target profit is $28,000. The dollar sales to attain that target profit is closest to:

A) $471,694

B) $454,054

C) $1,188,444

D) $1,144,000

107) Mcmurtry Corporation sells a product for $170 per unit. The product's current sales are 10,000 units and its break-even sales are 8,100 units. The margin of safety as a percentage of sales is closest to:

A) 23%

B) 81%

C) 19%

D) 77%

108) Cubie Corporation has provided the following data concerning its only product:

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
| Selling price | $ | 100 | per unit | |
| Current sales |  | 10,600 | units | |
| Break-even sales |  | 9,540 | units | |

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What is the margin of safety in dollars?

A) $1,060,000

B) $106,000

C) $954,000

D) $706,667

109) Ensley Corporation has provided the following data concerning its only product:

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
| Selling price | $ | 200 | per unit | |
| Current sales |  | 30,300 | units | |
| Break-even sales |  | 21,816 | units | |

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The margin of safety as a percentage of sales is closest to:

A) 61%

B) 28%

C) 72%

D) 39%

110) Evan's Electronics Boutique sells a digital camera. The following information was reported for the digital camera last month:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales | $ | 17,600 |
| Variable expenses |  | 9,680 |
| Contribution margin |  | 7,920 |
| Fixed expenses |  | 3,600 |
| Net operating income | $ | 4,320 |

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Evan's margin of safety in dollars and percentage are closest to:

A) $8,000 and 83%

B) $9,600 and 120%

C) $8,000 and 45%

D) $9,600 and 55%

111) Majid Corporation sells a product for $240 per unit. The product's current sales are 41,300 units and its break-even sales are 36,757 units.

What is the margin of safety in dollars?

A) $8,821,680

B) $6,608,000

C) $9,912,000

D) $1,090,320

112) Rushenberg Corporation's operating leverage is 10.8. If the company's sales increase by 14%, its net operating income should increase by about:

A) 151.2%

B) 14.0%

C) 77.1%

D) 10.8%

113) The February contribution format income statement of Mcabier Corporation appears below:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales | $ | 211,200 |
| Variable expenses |  | 96,000 |
| Contribution margin |  | 115,200 |
| Fixed expenses |  | 84,100 |
| Net operating income | $ | 31,100 |

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The degree of operating leverage is closest to:

A) 0.27

B) 6.79

C) 3.70

D) 0.15

114) Sales at East Corporation declined from $100,000 to $80,000, while net operating income declined by 300%. Given these data, the company must have had an operating leverage of:

A) 15

B) 2.7

C) 30

D) 12

115) Gamma Corporation has sales of $120,000, a contribution margin of $48,000, and a net operating income of $12,000. The company's degree of operating leverage is:

A) 2.5

B) 4.0

C) 10.0

D) 4.8

116) Bendel Inc. has an operating leverage of 7.3. If the company's sales increase by 3%, its net operating income should increase by about:

A) 243.3%

B) 7.3%

C) 21.9%

D) 3.0%

117) Alpha Corporation reported the following data for its most recent year: sales, $1,000,000; variable expenses, $600,000; and fixed expenses, $300,000. The company's degree of operating leverage is closest to:

A) 0.25

B) 2.0

C) 4.0

D) 3.3

118) Lofft Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (2,000 units) | $ | 120,000 |
| Variable expenses |  | 90,000 |
| Contribution margin |  | 30,000 |
| Fixed expenses |  | 16,500 |
| Net operating income | $ | 13,500 |

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Using the degree of operating leverage, the estimated percent increase in net operating income as the result of a 10% increase in sales is closest to: **(Round your intermediate calculations to 1 decimal place.)**

A) 1.13%

B) 88.89%

C) 22.22%

D) 4.50%

119) Serfass Corporation's contribution format income statement for July appears below:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales | $ | 260,000 |
| Variable expenses |  | 176,000 |
| Contribution margin |  | 84,000 |
| Fixed expenses |  | 71,800 |
| Net operating income | $ | 12,200 |

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|  |

The degree of operating leverage is closest to:

A) 0.05

B) 0.15

C) 21.31

D) 6.89

120) Bristo Corporation has sales of 2,000 units at $35 per unit. Variable expenses are 40% of the selling price. If total fixed expenses are $22,000, the degree of operating leverage is:

A) 0.79

B) 1.40

C) 2.10

D) 3.50

121) Lydic Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (4,000 units) | $ | 160,000 |
| Variable expenses |  | 112,000 |
| Contribution margin |  | 48,000 |
| Fixed expenses |  | 38,400 |
| Net operating income | $ | 9,600 |

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The degree of operating leverage is closest to:

A) 5.00

B) 0.20

C) 16.67

D) 0.06

122) A company sells two products--J and K. The sales mix is expected to be $3 of sales of Product K for every $1 of sales of Product J. Product J has a contribution margin ratio of 40% whereas Product K has a contribution margin ratio of 50%. Annual fixed expenses are expected to be $120,000. The overall break-even point for the company in dollar sales is expected to be closest to:

A) $196,000

B) $200,000

C) $252,632

D) $263,420

123) Roddam Corporation produces and sells two products. Data concerning those products for the most recent month appear below:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Product K09E | | | Product G17B | | | |
| Sales | $ | 28,000 |  | | $ | 38,000 |  | |
| Variable expenses | $ | 11,200 |  | | $ | 8,600 |  | |

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The fixed expenses of the entire company were $41,970. If the sales mix were to shift toward Product K09E with total dollar sales remaining constant, the overall break-even point for the entire company:

A) would increase.

B) could increase or decrease.

C) would not change.

D) would decrease.

124) Steffen Corporation has three products with the following characteristics:

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Product A | | | Product B | | | Product C | | | |
| Monthly sales in dollars | $ | 120,000 |  | $ | 160,000 |  | | $ | 200,000 |  | |
| Contribution margin ratio |  | 20 | % |  | 40 | % | |  | 16 | % | |

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The overall contribution margin ratio for the company as a whole is closest to:

A) 35.3%

B) 75.0%

C) 25.0%

D) 28.5%

125) Mcdale Inc. produces and sells two products. Data concerning those products for the most recent month appear below:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Product I49V | | | Product Z50U | | | |
| Sales | $ | 15,000 |  | | $ | 14,000 |  | |
| Variable expenses | $ | 3,300 |  | | $ | 2,790 |  | |

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The fixed expenses of the entire company were $18,460. The break-even point for the entire company is closest to:

A) $23,367

B) $10,540

C) $24,550

D) $18,460

126) Sunnripe Corporation manufactures and sells two types of beach towels, standard and deluxe. Sunnripe expects the following operating results next year:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Standard | | | Deluxe | | |
| Total sales | $ | 450,000 |  | $ | 50,000 |  | |
| Total variable expenses | $ | 360,000 |  | $ | 20,000 |  | |

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Sunnripe expects to have a total of $57,600 in fixed expenses next year. What is Sunnripe's overall break-even point next year in sales dollars?

A) $72,000

B) $144,000

C) $192,000

D) $240,000

127) Flesch Corporation produces and sells two products. In the most recent month, Product C90B had sales of $24,000 and variable expenses of $6,480. Product Y45E had sales of $29,000 and variable expenses of $11,010. The fixed expenses of the entire company were $32,280. If the sales mix were to shift toward Product C90B with total dollar sales remaining constant, the overall break-even point for the entire company:

A) would decrease.

B) would increase.

C) could increase or decrease.

D) would not change.

128) Newham Corporation produces and sells two products. In the most recent month, Product R10L had sales of $28,000 and variable expenses of $6,440. Product X96N had sales of $22,000 and variable expenses of $7,560. The fixed expenses of the entire company were $32,710. The break-even point for the entire company is closest to:

A) $32,710

B) $45,431

C) $46,710

D) $17,290

129) Keomuangtai Corporation produces and sells a single product. The company has provided its contribution format income statement for October.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (4,600 units) | $ | 266,800 |
| Variable expenses |  | 179,400 |
| Contribution margin |  | 87,400 |
| Fixed expenses |  | 62,200 |
| Net operating income | $ | 25,200 |

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If the company sells 4,500 units, its total contribution margin should be closest to:

A) $85,500

B) $24,652

C) $87,400

D) $81,600

130) Keomuangtai Corporation produces and sells a single product. The company has provided its contribution format income statement for October.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (4,600 units) | $ | 266,800 |
| Variable expenses |  | 179,400 |
| Contribution margin |  | 87,400 |
| Fixed expenses |  | 62,200 |
| Net operating income | $ | 25,200 |

If the company sells 4,200 units, its net operating income should be closest to:

A) $17,600

B) $23,009

C) $25,200

D) $2,000

131) Wight Corporation has provided its contribution format income statement for June. The company produces and sells a single product.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (9,600 units) | $ | 336,000 |
| Variable expenses |  | 144,000 |
| Contribution margin |  | 192,000 |
| Fixed expenses |  | 137,000 |
| Net operating income | $ | 55,000 |

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If the company sells 9,100 units, its total contribution margin should be closest to:

A) $174,500

B) $192,000

C) $52,135

D) $182,000

132) Wight Corporation has provided its contribution format income statement for June. The company produces and sells a single product.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (9,600 units) | $ | 336,000 |
| Variable expenses |  | 144,000 |
| Contribution margin |  | 192,000 |
| Fixed expenses |  | 137,000 |
| Net operating income | $ | 55,000 |

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If the company sells 9,700 units, its net operating income should be closest to:

A) $57,000

B) $55,000

C) $55,573

D) $58,500

133) Lister Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (3,000 units) | $ | 90,000 |
| Variable expenses |  | 58,500 |
| Contribution margin |  | 31,500 |
| Fixed expenses |  | 21,000 |
| Net operating income | $ | 10,500 |

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If sales increase to 3,040 units, the increase in net operating income would be closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $420.00

B) $140.00

C) $1,200.00

D) $780.00

134) Lister Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (3,000 units) | $ | 90,000 |
| Variable expenses |  | 58,500 |
| Contribution margin |  | 31,500 |
| Fixed expenses |  | 21,000 |
| Net operating income | $ | 10,500 |

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If sales decline to 2,900 units, the net operating income would be closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $1,050

B) $30,450

C) $10,150

D) $9,450

135) Souza Inc, which produces and sells a single product, has provided its contribution format income statement for October.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (4,000 units) | $ | 88,000 |
| Variable expenses |  | 40,000 |
| Contribution margin |  | 48,000 |
| Fixed expenses |  | 41,700 |
| Net operating income | $ | 6,300 |

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If the company sells 3,600 units, its total contribution margin should be closest to:

A) $39,200

B) $5,670

C) $43,200

D) $48,000

136) Souza Inc, which produces and sells a single product, has provided its contribution format income statement for October.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (4,000 units) | $ | 88,000 |
| Variable expenses |  | 40,000 |
| Contribution margin |  | 48,000 |
| Fixed expenses |  | 41,700 |
| Net operating income | $ | 6,300 |

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If the company sells 3,500 units, its net operating income should be closest to:

A) $5,513

B) $6,300

C) $300

D) -$4,700

137) Kelsay Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (9,000 units) | $ | 540,000 |
| Variable expenses |  | 405,000 |
| Contribution margin |  | 135,000 |
| Fixed expenses |  | 130,500 |
| Net operating income | $ | 4,500 |

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The contribution margin per unit is closest to:

A) $15.00

B) $0.50

C) $45.00

D) $60.00

138) Kelsay Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (9,000 units) | $ | 540,000 |
| Variable expenses |  | 405,000 |
| Contribution margin |  | 135,000 |
| Fixed expenses |  | 130,500 |
| Net operating income | $ | 4,500 |

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The contribution margin ratio is closest to:

A) 75%

B) 67%

C) 25%

D) 33%

139) Kelsay Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (9,000 units) | $ | 540,000 |
| Variable expenses |  | 405,000 |
| Contribution margin |  | 135,000 |
| Fixed expenses |  | 130,500 |
| Net operating income | $ | 4,500 |

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The variable expense ratio is closest to:

A) 33%

B) 67%

C) 25%

D) 75%

140) A cement manufacturer has supplied the following data:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Tons of cement produced and sold |  | 680,000 |
| Sales revenue | $ | 2,788,000 |
| Variable manufacturing expense | $ | 1,156,000 |
| Fixed manufacturing expense | $ | 760,000 |
| Variable selling and administrative expense | $ | 272,000 |
| Fixed selling and administrative expense | $ | 294,000 |
| Net operating income | $ | 306,000 |

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What is the company's unit contribution margin? **(Round your intermediate calculations to 2 decimal places.)**

A) $0.45 per unit

B) $2.10 per unit

C) $2.00 per unit

D) $4.10 per unit

141) A cement manufacturer has supplied the following data:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Tons of cement produced and sold |  | 680,000 |
| Sales revenue | $ | 2,788,000 |
| Variable manufacturing expense | $ | 1,156,000 |
| Fixed manufacturing expense | $ | 760,000 |
| Variable selling and administrative expense | $ | 272,000 |
| Fixed selling and administrative expense | $ | 294,000 |
| Net operating income | $ | 306,000 |

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The company's contribution margin ratio is closest to:

A) 39.0%

B) 51.2%

C) 11.0%

D) 48.8%

142) A cement manufacturer has supplied the following data:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Tons of cement produced and sold |  | 680,000 |
| Sales revenue | $ | 2,788,000 |
| Variable manufacturing expense | $ | 1,156,000 |
| Fixed manufacturing expense | $ | 760,000 |
| Variable selling and administrative expense | $ | 272,000 |
| Fixed selling and administrative expense | $ | 294,000 |
| Net operating income | $ | 306,000 |

If the company increases its unit sales volume by 4% without increasing its fixed expenses, then total net operating income should be closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $12,240

B) $318,240

C) $360,400

D) $311,973

143) A tile manufacturer has supplied the following data:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Boxes of tiles produced and sold |  | 520,000 |
| Sales revenue | $ | 2,132,000 |
| Variable manufacturing expense | $ | 650,000 |
| Fixed manufacturing expense | $ | 464,000 |
| Variable selling and administrative expense | $ | 260,000 |
| Fixed selling and administrative expense | $ | 312,000 |
| Net operating income | $ | 446,000 |

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What is the company's unit contribution margin? **(Round your intermediate calculations to 2 decimal places.)**

A) $0.86 per unit

B) $2.35 per unit

C) $4.10 per unit

D) $1.75 per unit

144) A tile manufacturer has supplied the following data:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Boxes of tiles produced and sold |  | 520,000 |
| Sales revenue | $ | 2,132,000 |
| Variable manufacturing expense | $ | 650,000 |
| Fixed manufacturing expense | $ | 464,000 |
| Variable selling and administrative expense | $ | 260,000 |
| Fixed selling and administrative expense | $ | 312,000 |
| Net operating income | $ | 446,000 |

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The company's contribution margin ratio is closest to:

A) 42.7%

B) 57.3%

C) 45.8%

D) 21.0%

145) A tile manufacturer has supplied the following data:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Boxes of tiles produced and sold |  | 520,000 |
| Sales revenue | $ | 2,132,000 |
| Variable manufacturing expense | $ | 650,000 |
| Fixed manufacturing expense | $ | 464,000 |
| Variable selling and administrative expense | $ | 260,000 |
| Fixed selling and administrative expense | $ | 312,000 |
| Net operating income | $ | 446,000 |

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If the company increases its unit sales volume by 3% without increasing its fixed expenses, then total net operating income should be closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $459,380

B) $453,667

C) $13,380

D) $482,660

146) Sjostrom Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (7,000 units) | $ | 280,000 |
| Variable expenses |  | 182,000 |
| Contribution margin |  | 98,000 |
| Fixed expenses |  | 84,000 |
| Net operating income | $ | 14,000 |

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If the selling price increases by $3 per unit and the sales volume decreases by 600 units, the net operating income would be closest to:

A) $24,800

B) $35,000

C) $19,200

D) $32,000

147) Sjostrom Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (7,000 units) | $ | 280,000 |
| Variable expenses |  | 182,000 |
| Contribution margin |  | 98,000 |
| Fixed expenses |  | 84,000 |
| Net operating income | $ | 14,000 |

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If the variable cost per unit increases by $10, spending on advertising increases by $1,500, and unit sales increase by 15,800 units, the net operating income would be closest to:

A) $12,500

B) $114,100

C) $91,200

D) $5,700

148) Remmel Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (6,000 units) | $ | 300,000 |
| Variable expenses |  | 240,000 |
| Contribution margin |  | 60,000 |
| Fixed expenses |  | 59,000 |
| Net operating income | $ | 1,000 |

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If sales increase to 6,020 units, the increase in net operating income would be closest to:

A) $1,000.00

B) $800.00

C) $200.00

D) $3.33

149) Remmel Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (6,000 units) | $ | 300,000 |
| Variable expenses |  | 240,000 |
| Contribution margin |  | 60,000 |
| Fixed expenses |  | 59,000 |
| Net operating income | $ | 1,000 |

If the selling price increases by $3 per unit and the sales volume decreases by 400 units, the net operating income would be closest to:

A) $19,000

B) $16,800

C) $13,800

D) $17,733

150) Valdez Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (6,000 units) | $ | 240,000 |
| Variable expenses |  | 180,000 |
| Contribution margin |  | 60,000 |
| Fixed expenses |  | 54,000 |
| Net operating income | $ | 6,000 |

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The break-even point in unit sales is closest to:

A) 5,850 units

B) 4,500 units

C) 0 units

D) 5,400 units

151) Valdez Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (6,000 units) | $ | 240,000 |
| Variable expenses |  | 180,000 |
| Contribution margin |  | 60,000 |
| Fixed expenses |  | 54,000 |
| Net operating income | $ | 6,000 |

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The number of units that must be sold to achieve a target profit of $24,000 is closest to:

A) 30,000 units

B) 7,800 units

C) 13,800 units

D) 24,000 units

152) Nussbaum Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (9,000 units) | $ | 180,000 |
| Variable expenses |  | 117,000 |
| Contribution margin |  | 63,000 |
| Fixed expenses |  | 56,700 |
| Net operating income | $ | 6,300 |

The break-even point in unit sales is closest to:

A) 0 units

B) 5,850 units

C) 8,100 units

D) 8,685 units

153) Nussbaum Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (9,000 units) | $ | 180,000 |
| Variable expenses |  | 117,000 |
| Contribution margin |  | 63,000 |
| Fixed expenses |  | 56,700 |
| Net operating income | $ | 6,300 |

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The break-even point in dollar sales is closest to:

A) $162,000

B) $117,000

C) $0

D) $173,700

154) Nussbaum Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (9,000 units) | $ | 180,000 |
| Variable expenses |  | 117,000 |
| Contribution margin |  | 63,000 |
| Fixed expenses |  | 56,700 |
| Net operating income | $ | 6,300 |

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The number of units that must be sold to achieve a target profit of $16,100 is closest to:

A) 32,000 units

B) 19,400 units

C) 10,400 units

D) 23,000 units

155) Maruca Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (9,000 units) | $ | 270,000 |
| Variable expenses |  | 175,500 |
| Contribution margin |  | 94,500 |
| Fixed expenses |  | 86,100 |
| Net operating income | $ | 8,400 |

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The break-even point in dollar sales is closest to:

A) $175,500

B) $261,600

C) $246,000

D) $0

156) Maruca Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (9,000 units) | $ | 270,000 |
| Variable expenses |  | 175,500 |
| Contribution margin |  | 94,500 |
| Fixed expenses |  | 86,100 |
| Net operating income | $ | 8,400 |

The margin of safety in dollars is closest to:

A) $86,100

B) $8,400

C) $24,000

D) $94,500

157) Golebiewski Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (5,000 units) | $ | 150,000 |
| Variable expenses |  | 112,500 |
| Contribution margin |  | 37,500 |
| Fixed expenses |  | 35,250 |
| Net operating income | $ | 2,250 |

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The margin of safety in dollars is closest to:

A) $2,250

B) $9,000

C) $35,250

D) $37,500

158) Golebiewski Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (5,000 units) | $ | 150,000 |
| Variable expenses |  | 112,500 |
| Contribution margin |  | 37,500 |
| Fixed expenses |  | 35,250 |
| Net operating income | $ | 2,250 |

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The margin of safety percentage is closest to:

A) 2%

B) 24%

C) 75%

D) 6%

159) Shambo Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (3,000 units) | $ | 60,000 |
| Variable expenses |  | 42,000 |
| Contribution margin |  | 18,000 |
| Fixed expenses |  | 13,200 |
| Net operating income | $ | 4,800 |

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The margin of safety percentage is closest to:

A) 27%

B) 70%

C) 22%

D) 8%

160) Shambo Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (3,000 units) | $ | 60,000 |
| Variable expenses |  | 42,000 |
| Contribution margin |  | 18,000 |
| Fixed expenses |  | 13,200 |
| Net operating income | $ | 4,800 |

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Using the degree of operating leverage, the estimated percent increase in net operating income as the result of a 20% increase in sales is closest to: **(Round your intermediate calculations to 1 decimal place.)**

A) 75.00%

B) 1.60%

C) 250.00%

D) 5.33%

161) A company that makes organic fertilizer has supplied the following data:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Bags produced and sold |  | 200,000 |
| Sales revenue | $ | 1,560,000 |
| Variable manufacturing expense | $ | 660,000 |
| Fixed manufacturing expense | $ | 448,000 |
| Variable selling and administrative expense | $ | 180,000 |
| Fixed selling and administrative expense | $ | 214,000 |
| Net operating income | $ | 58,000 |

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The company's margin of safety in units is closest to: **(Round per unit calculations to 2 decimal places.)**

A) 115,128 units

B) 16,111 units

C) 168,986 units

D) 100,444 units

162) A company that makes organic fertilizer has supplied the following data:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Bags produced and sold |  | 200,000 |
| Sales revenue | $ | 1,560,000 |
| Variable manufacturing expense | $ | 660,000 |
| Fixed manufacturing expense | $ | 448,000 |
| Variable selling and administrative expense | $ | 180,000 |
| Fixed selling and administrative expense | $ | 214,000 |
| Net operating income | $ | 58,000 |

|  |
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The company's unit contribution margin is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $4.50 per unit

B) $6.90 per unit

C) $3.60 per unit

D) $4.20 per unit

163) A company that makes organic fertilizer has supplied the following data:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Bags produced and sold |  | 200,000 |
| Sales revenue | $ | 1,560,000 |
| Variable manufacturing expense | $ | 660,000 |
| Fixed manufacturing expense | $ | 448,000 |
| Variable selling and administrative expense | $ | 180,000 |
| Fixed selling and administrative expense | $ | 214,000 |
| Net operating income | $ | 58,000 |

The company's degree of operating leverage is closest to:

A) 1.27

B) 26.90

C) 3.45

D) 12.41

164) A manufacturer of premium wire strippers has supplied the following data:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Units produced and sold |  | 580,000 |
| Sales revenue | $ | 4,176,000 |
| Variable manufacturing expense | $ | 2,871,000 |
| Fixed manufacturing expense | $ | 778,000 |
| Variable selling and administrative expense | $ | 348,000 |
| Fixed selling and administrative expense | $ | 104,000 |
| Net operating income | $ | 75,000 |

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The company's margin of safety in units is closest to: **(Round per unit calculations to 2 decimal places.)**

A) 234,222 units

B) 564,242 units

C) 45,455 units

D) 457,500 units

165) A manufacturer of premium wire strippers has supplied the following data:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Units produced and sold |  | 580,000 |
| Sales revenue | $ | 4,176,000 |
| Variable manufacturing expense | $ | 2,871,000 |
| Fixed manufacturing expense | $ | 778,000 |
| Variable selling and administrative expense | $ | 348,000 |
| Fixed selling and administrative expense | $ | 104,000 |
| Net operating income | $ | 75,000 |

|  |
| --- |
|  |

The company's unit contribution margin is closest to:

A) $2.25 per unit

B) $5.55 per unit

C) $1.65 per unit

D) $6.60 per unit

166) A manufacturer of premium wire strippers has supplied the following data:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Units produced and sold |  | 580,000 |
| Sales revenue | $ | 4,176,000 |
| Variable manufacturing expense | $ | 2,871,000 |
| Fixed manufacturing expense | $ | 778,000 |
| Variable selling and administrative expense | $ | 348,000 |
| Fixed selling and administrative expense | $ | 104,000 |
| Net operating income | $ | 75,000 |

The company's degree of operating leverage is closest to:

A) 55.68

B) 3.65

C) 7.73

D) 12.76

167) A manufacturer of cedar shingles has supplied the following data:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Bundles of cedar shakes produced and sold |  | 360,000 |
| Sales revenue | $ | 2,412,000 |
| Variable manufacturing expense | $ | 1,170,000 |
| Fixed manufacturing expense | $ | 714,000 |
| Variable selling and administrative expense | $ | 414,000 |
| Fixed selling and administrative expense | $ | 82,000 |
| Net operating income | $ | 32,000 |

The company's break-even in unit sales is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) 118,806

B) 206,957

C) 346,087

D) 14,775

168) A manufacturer of cedar shingles has supplied the following data:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Bundles of cedar shakes produced and sold |  | 360,000 |
| Sales revenue | $ | 2,412,000 |
| Variable manufacturing expense | $ | 1,170,000 |
| Fixed manufacturing expense | $ | 714,000 |
| Variable selling and administrative expense | $ | 414,000 |
| Fixed selling and administrative expense | $ | 82,000 |
| Net operating income | $ | 32,000 |

The company's contribution margin ratio is closest to:

A) 72.6%

B) 65.7%

C) 34.3%

D) 27.4%

169) A manufacturer of cedar shingles has supplied the following data:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Bundles of cedar shakes produced and sold |  | 360,000 |
| Sales revenue | $ | 2,412,000 |
| Variable manufacturing expense | $ | 1,170,000 |
| Fixed manufacturing expense | $ | 714,000 |
| Variable selling and administrative expense | $ | 414,000 |
| Fixed selling and administrative expense | $ | 82,000 |
| Net operating income | $ | 32,000 |

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|  |

The company's degree of operating leverage is closest to:

A) 11.25

B) 25.88

C) 1.99

D) 75.38

170) A manufacturer of tiling grout has supplied the following data:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Kilograms produced and sold |  | 380,000 |
| Sales revenue | $ | 2,736,000 |
| Variable manufacturing expense | $ | 1,349,000 |
| Fixed manufacturing expense | $ | 336,000 |
| Variable selling and administrative expense | $ | 399,000 |
| Fixed selling and administrative expense | $ | 372,000 |
| Net operating income | $ | 280,000 |

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The company's break-even in unit sales is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) 272,308

B) 98,333

C) 92,055

D) 60,488

171) A manufacturer of tiling grout has supplied the following data:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Kilograms produced and sold |  | 380,000 |
| Sales revenue | $ | 2,736,000 |
| Variable manufacturing expense | $ | 1,349,000 |
| Fixed manufacturing expense | $ | 336,000 |
| Variable selling and administrative expense | $ | 399,000 |
| Fixed selling and administrative expense | $ | 372,000 |
| Net operating income | $ | 280,000 |

|  |
| --- |
|  |

The company's contribution margin ratio is closest to:

A) 28.9%

B) 63.9%

C) 71.1%

D) 36.1%

172) A manufacturer of tiling grout has supplied the following data:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Kilograms produced and sold |  | 380,000 |
| Sales revenue | $ | 2,736,000 |
| Variable manufacturing expense | $ | 1,349,000 |
| Fixed manufacturing expense | $ | 336,000 |
| Variable selling and administrative expense | $ | 399,000 |
| Fixed selling and administrative expense | $ | 372,000 |
| Net operating income | $ | 280,000 |

|  |
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|  |

The company's degree of operating leverage is closest to:

A) 9.77

B) 1.36

C) 3.53

D) 2.47

173) Houpe Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Per Unit | | | Percent of Sales | | |
| Selling price | $ | 140 |  |  | 100 | % | |
| Variable expenses |  | 42 |  |  | 30 | % | |
| Contribution margin | $ | 98 |  |  | 70 | % | |

Fixed expenses are $490,000 per month. The company is currently selling 6,000 units per month.

The marketing manager believes that a $14,000 increase in the monthly advertising budget would result in a 150 unit increase in monthly sales. What should be the overall effect on the company's monthly net operating income of this change?

A) increase of $700

B) increase of $14,700

C) decrease of $14,000

D) decrease of $700

174) Houpe Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Per Unit | | | Percent of Sales | | |
| Selling price | $ | 140 |  |  | 100 | % | |
| Variable expenses |  | 42 |  |  | 30 | % | |
| Contribution margin | $ | 98 |  |  | 70 | % | |

Fixed expenses are $490,000 per month. The company is currently selling 6,000 units per month.

Management is considering using a new component that would increase the unit variable cost by $5. Since the new component would increase the features of the company's product, the marketing manager predicts that monthly sales would increase by 300 units. What should be the overall effect on the company's monthly net operating income of this change?

A) decrease of $2,100

B) decrease of $27,900

C) increase of $2,100

D) increase of $27,900

175) Houpe Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Per Unit | | | Percent of Sales | | |
| Selling price | $ | 140 |  |  | 100 | % | |
| Variable expenses |  | 42 |  |  | 30 | % | |
| Contribution margin | $ | 98 |  |  | 70 | % | |

Fixed expenses are $490,000 per month. The company is currently selling 6,000 units per month.

The marketing manager would like to cut the selling price by $7 and increase the advertising budget by $28,000 per month. The marketing manager predicts that these two changes would increase monthly sales by 500 units. What should be the overall effect on the company's monthly net operating income of this change?

A) decrease of $17,500

B) increase of $17,500

C) decrease of $24,500

D) increase of $38,500

176) Houpe Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Per Unit | | | Percent of Sales | | |
| Selling price | $ | 140 |  |  | 100 | % | |
| Variable expenses |  | 42 |  |  | 30 | % | |
| Contribution margin | $ | 98 |  |  | 70 | % | |

Fixed expenses are $490,000 per month. The company is currently selling 6,000 units per month.

The marketing manager would like to introduce sales commissions as an incentive for the sales staff. The marketing manager has proposed a commission of $11 per unit. In exchange, the sales staff would accept a decrease in their salaries of $58,000 per month. (This is the company's savings for the entire sales staff.) The marketing manager predicts that introducing this sales incentive would increase monthly sales by 100 units. What should be the overall effect on the company's monthly net operating income of this change?

A) increase of $700

B) increase of $56,900

C) decrease of $115,300

D) increase of $588,700

177) Data concerning Lemelin Corporation's single product appear below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Per Unit | | | Percent of Sales | | |
| Selling price | $ | 230 |  |  | 100 | % | |
| Variable expenses |  | 115 |  |  | 50 | % | |
| Contribution margin | $ | 115 |  |  | 50 | % | |

The company is currently selling 7,000 units per month. Fixed expenses are $581,000 per month.

Management is considering using a new component that would increase the unit variable cost by $3. Since the new component would increase the features of the company's product, the marketing manager predicts that monthly sales would increase by 200 units. What should be the overall effect on the company's monthly net operating income of this change?

A) decrease of $22,400

B) decrease of $1,400

C) increase of $22,400

D) increase of $1,400

178) Data concerning Lemelin Corporation's single product appear below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Per Unit | | | Percent of Sales | | |
| Selling price | $ | 230 |  |  | 100 | % | |
| Variable expenses |  | 115 |  |  | 50 | % | |
| Contribution margin | $ | 115 |  |  | 50 | % | |

The company is currently selling 7,000 units per month. Fixed expenses are $581,000 per month.

The marketing manager believes that an $11,000 increase in the monthly advertising budget would result in a 100 unit increase in monthly sales. What should be the overall effect on the company's monthly net operating income of this change?

A) decrease of $11,000

B) increase of $11,500

C) decrease of $500

D) increase of $500

179) Data concerning Lemelin Corporation's single product appear below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Per Unit | | | Percent of Sales | | |
| Selling price | $ | 230 |  |  | 100 | % | |
| Variable expenses |  | 115 |  |  | 50 | % | |
| Contribution margin | $ | 115 |  |  | 50 | % | |

The company is currently selling 7,000 units per month. Fixed expenses are $581,000 per month.

The marketing manager would like to introduce sales commissions as an incentive for the sales staff. The marketing manager has proposed a commission of $20 per unit. In exchange, the sales staff would accept a decrease in their salaries of $113,000 per month. (This is the company's savings for the entire sales staff.) The marketing manager predicts that introducing this sales incentive would increase monthly sales by 300 units. What should be the overall effect on the company's monthly net operating income of this change?

A) decrease of $224,500

B) increase of $107,000

C) increase of $1,500

D) increase of $806,500

180) Data concerning Lemelin Corporation's single product appear below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Per Unit | | | Percent of Sales | | |
| Selling price | $ | 230 |  |  | 100 | % | |
| Variable expenses |  | 115 |  |  | 50 | % | |
| Contribution margin | $ | 115 |  |  | 50 | % | |

The company is currently selling 7,000 units per month. Fixed expenses are $581,000 per month.

The marketing manager would like to cut the selling price by $18 and increase the advertising budget by $37,000 per month. The marketing manager predicts that these two changes would increase monthly sales by 1,600 units. What should be the overall effect on the company's monthly net operating income of this change?

A) increase of $118,200

B) increase of $302,200

C) decrease of $118,200

D) decrease of $7,800

181) Thornbrough Corporation produces and sells a single product with the following characteristics:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Per Unit | | | Percent of Sales | | |
| Selling price | $ | 220 |  |  | 100 | % | |
| Variable expenses |  | 44 |  |  | 20 | % | |
| Contribution margin | $ | 176 |  |  | 80 | % | |

The company is currently selling 7,000 units per month. Fixed expenses are $901,000 per month.

Management is considering using a new component that would increase the unit variable cost by $11. Since the new component would increase the features of the company's product, the marketing manager predicts that monthly sales would increase by 500 units. What should be the overall effect on the company's monthly net operating income of this change?

A) increase of $82,500

B) decrease of $5,500

C) decrease of $82,500

D) increase of $5,500

182) Thornbrough Corporation produces and sells a single product with the following characteristics:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Per Unit | | | Percent of Sales | | |
| Selling price | $ | 220 |  |  | 100 | % | |
| Variable expenses |  | 44 |  |  | 20 | % | |
| Contribution margin | $ | 176 |  |  | 80 | % | |

The company is currently selling 7,000 units per month. Fixed expenses are $901,000 per month.

The marketing manager believes that a $28,000 increase in the monthly advertising budget would result in a 190 unit increase in monthly sales. What should be the overall effect on the company's monthly net operating income of this change?

A) decrease of $28,000

B) increase of $33,440

C) increase of $5,440

D) decrease of $5,440

183) Thornbrough Corporation produces and sells a single product with the following characteristics:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Per Unit | | | Percent of Sales | | |
| Selling price | $ | 220 |  |  | 100 | % | |
| Variable expenses |  | 44 |  |  | 20 | % | |
| Contribution margin | $ | 176 |  |  | 80 | % | |

The company is currently selling 7,000 units per month. Fixed expenses are $901,000 per month.

The marketing manager would like to cut the selling price by $18 and increase the advertising budget by $53,000 per month. The marketing manager predicts that these two changes would increase monthly sales by 1,000 units. What should be the overall effect on the company's monthly net operating income of this change?

A) decrease of $105,000

B) increase of $149,000

C) increase of $105,000

D) decrease of $21,000

184) Thornbrough Corporation produces and sells a single product with the following characteristics:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Per Unit | | | Percent of Sales | | |
| Selling price | $ | 220 |  |  | 100 | % | |
| Variable expenses |  | 44 |  |  | 20 | % | |
| Contribution margin | $ | 176 |  |  | 80 | % | |

The company is currently selling 7,000 units per month. Fixed expenses are $901,000 per month.

The marketing manager would like to introduce sales commissions as an incentive for the sales staff. The marketing manager has proposed a commission of $11 per unit. In exchange, the sales staff would accept a decrease in their salaries of $65,000 per month. (This is the company's savings for the entire sales staff.) The marketing manager predicts that introducing this sales incentive would increase monthly sales by 300 units. What should be the overall effect on the company's monthly net operating income of this change?

A) increase of $1,269,500

B) increase of $37,500

C) increase of $61,700

D) decrease of $92,500

185) Heathman Inc. produces and sells a single product. The selling price of the product is $230.00 per unit and its variable cost is $89.70 per unit. The fixed expense is $308,660 per month.

The break-even in monthly unit sales is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) 2,328 units

B) 1,342 units

C) 3,441 units

D) 2,200 units

186) Heathman Inc. produces and sells a single product. The selling price of the product is $230.00 per unit and its variable cost is $89.70 per unit. The fixed expense is $308,660 per month.

The break-even in monthly dollar sales is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $791,436

B) $535,365

C) $506,000

D) $308,660

187) Data concerning Sinisi Corporation's single product appear below:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Selling price per unit | $ | 200.00 |
| Variable expense per unit | $ | 58.00 |
| Fixed expense per month | $ | 407,540 |

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The break-even in monthly unit sales is closest to:

A) 2,038 units

B) 7,027 units

C) 2,870 units

D) 3,978 units

188) Data concerning Sinisi Corporation's single product appear below:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Selling price per unit | $ | 200.00 |
| Variable expense per unit | $ | 58.00 |
| Fixed expense per month | $ | 407,540 |

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The break-even in monthly dollar sales is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $407,600

B) $1,405,400

C) $574,000

D) $795,600

189) Zanetti Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Selling price per unit | $ | 110.00 |
| Variable expense per unit | $ | 34.10 |
| Fixed expense per month | $ | 132,066 |

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The break-even in monthly unit sales is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) 3,873 units

B) 1,740 units

C) 1,201 units

D) 2,271 units

190) Zanetti Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Selling price per unit | $ | 110.00 |
| Variable expense per unit | $ | 34.10 |
| Fixed expense per month | $ | 132,066 |

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The break-even in monthly dollar sales is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $191,400

B) $249,810

C) $426,030

D) $132,110

191) Junior Bodway, Inc., has provided the following budgeted data:

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
| Sales |  | 10,000 | units | |
| Selling price | $ | 50 | per unit | |
| Variable expense | $ | 30 | per unit | |
| Fixed expense | $ | 180,000 |  | |

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What is the company's break-even point in sales dollars?

A) $450,000

B) $180,000

C) $300,000

D) $500,000

192) Junior Bodway, Inc., has provided the following budgeted data:

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
| Sales |  | 10,000 | units | |
| Selling price | $ | 50 | per unit | |
| Variable expense | $ | 30 | per unit | |
| Fixed expense | $ | 180,000 |  | |

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How many units would the company have to sell in order to have a net operating income of $40,000?

A) 20,000 units

B) 9,000 units

C) 11,000 units

D) 7,333 units

193) Junior Bodway, Inc., has provided the following budgeted data:

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
| Sales |  | 10,000 | units | |
| Selling price | $ | 50 | per unit | |
| Variable expense | $ | 30 | per unit | |
| Fixed expense | $ | 180,000 |  | |

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At the budgeted sales level of 10,000 units, what is the company's degree of operating leverage?

A) 10.0

B) 6.0

C) 22.5

D) 5.0

194) Maziarz Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Selling price per unit | $ | 220.00 |
| Variable expense per unit | $ | 72.60 |
| Fixed expense per month | $ | 548,328 |

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Assume the company's target profit is $14,000. The unit sales to attain that target profit is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) 7,746 units

B) 2,556 units

C) 4,706 units

D) 3,815 units

195) Maziarz Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Selling price per unit | $ | 220.00 |
| Variable expense per unit | $ | 72.60 |
| Fixed expense per month | $ | 548,328 |

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Assume the company's target profit is $16,000. The dollar sales to attain that target profit is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $564,328

B) $1,710,085

C) $1,038,898

D) $842,281

196) Speckman Enterprises, Inc., produces and sells a single product whose selling price is $200.00 per unit and whose variable expense is $68.00 per unit. The company's monthly fixed expense is $514,800.

Assume the company's target profit is $11,000. The unit sales to attain that target profit is closest to:

A) 2,629 units

B) 3,983 units

C) 4,781 units

D) 7,732 units

197) Speckman Enterprises, Inc., produces and sells a single product whose selling price is $200.00 per unit and whose variable expense is $68.00 per unit. The company's monthly fixed expense is $514,800.

Assume the company's target profit is $12,000. The dollar sales to attain that target profit is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $1,549,412

B) $798,182

C) $526,800

D) $958,131

198) Data concerning Strite Corporation's single product appear below:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Selling price per unit | $ | 150.00 |
| Variable expense per unit | $ | 42.00 |
| Fixed expense per month | $ | 421,200 |

|  |
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Assume the company's target profit is $17,000. The unit sales to attain that target profit is closest to:

A) 5,804 units

B) 2,921 units

C) 4,057 units

D) 10,433 units

199) Data concerning Strite Corporation's single product appear below:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Selling price per unit | $ | 150.00 |
| Variable expense per unit | $ | 42.00 |
| Fixed expense per month | $ | 421,200 |

|  |
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|  |

Assume the company's target profit is $8,000. The dollar sales to attain that target profit is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $596,111

B) $1,532,857

C) $852,723

D) $429,200

200) Highjinks, Inc., has provided the following budgeted data:

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
| Sales |  | 20,000 | units | |
| Selling price | $ | 100 | per unit | |
| Variable expense | $ | 70 | per unit | |
| Fixed expense | $ | 450,000 |  | |

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What is the company's margin of safety as a percentage of sales?

A) 50%

B) 25%

C) 75%

D) 100%

201) Highjinks, Inc., has provided the following budgeted data:

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
| Sales |  | 20,000 | units | |
| Selling price | $ | 100 | per unit | |
| Variable expense | $ | 70 | per unit | |
| Fixed expense | $ | 450,000 |  | |

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How many units would the company have to sell in order to have a net operating income equal to 5% of total sales dollars?

A) 18,000 units

B) 20,000 units

C) 15,333 units

D) 14,286 units

202) Jerrel Corporation sells a product for $230 per unit. The product's current sales are 24,000 units and its break-even sales are 17,280 units.

What is the margin of safety in dollars?

A) $5,520,000

B) $1,545,600

C) $3,974,400

D) $3,680,000

203) Jerrel Corporation sells a product for $230 per unit. The product's current sales are 24,000 units and its break-even sales are 17,280 units.

The margin of safety as a percentage of sales is closest to:

A) 61%

B) 28%

C) 72%

D) 39%

204) Maruska Corporation has provided the following data concerning its only product:

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
| Selling price | $ | 180 | per unit | |
| Current sales |  | 29,800 | units | |
| Break-even sales |  | 25,032 | units | |

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What is the margin of safety in dollars?

A) $4,505,760

B) $858,240

C) $3,576,000

D) $5,364,000

205) Maruska Corporation has provided the following data concerning its only product:

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
| Selling price | $ | 180 | per unit | |
| Current sales |  | 29,800 | units | |
| Break-even sales |  | 25,032 | units | |

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The margin of safety as a percentage of sales is closest to:

A) 19%

B) 16%

C) 84%

D) 81%

206) Bois Corporation has provided its contribution format income statement for January.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales | $ | 426,400 |
| Variable expenses |  | 260,000 |
| Contribution margin |  | 166,400 |
| Fixed expenses |  | 120,900 |
| Net operating income | $ | 45,500 |

|  |
| --- |
|  |

The degree of operating leverage is closest to:

A) 0.11

B) 9.37

C) 0.27

D) 3.66

207) Bois Corporation has provided its contribution format income statement for January.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales | $ | 426,400 |
| Variable expenses |  | 260,000 |
| Contribution margin |  | 166,400 |
| Fixed expenses |  | 120,900 |
| Net operating income | $ | 45,500 |

|  |
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|  |

If the company's sales increase by 7%, its net operating income should increase by about: **(Round your intermediate calculations to 2 decimal places.)**

A) 26%

B) 7%

C) 66%

D) 11%

208) Sebree Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (7,000 units) | $ | 280,000 |
| Variable expenses |  | 168,000 |
| Contribution margin |  | 112,000 |
| Fixed expenses |  | 105,600 |
| Net operating income | $ | 6,400 |

|  |
| --- |
|  |

The degree of operating leverage is closest to:

A) 0.06

B) 17.50

C) 43.75

D) 0.02

209) Sebree Corporation has provided the following contribution format income statement. Assume that the following information is within the relevant range.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales (7,000 units) | $ | 280,000 |
| Variable expenses |  | 168,000 |
| Contribution margin |  | 112,000 |
| Fixed expenses |  | 105,600 |
| Net operating income | $ | 6,400 |

|  |
| --- |
|  |

Using the degree of operating leverage, the estimated percent increase in net operating income as the result of a 5% increase in sales is closest to: **(Round your intermediate calculations to 1 decimal place.)**

A) 0.29%

B) 87.50%

C) 0.11%

D) 218.75%

210) The July contribution format income statement of Doxtater Corporation appears below:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales | $ | 564,400 |
| Variable expenses |  | 312,800 |
| Contribution margin |  | 251,600 |
| Fixed expenses |  | 193,800 |
| Net operating income | $ | 57,800 |

|  |
| --- |
|  |

The degree of operating leverage is closest to:

A) 0.23

B) 0.10

C) 4.35

D) 9.76

211) The July contribution format income statement of Doxtater Corporation appears below:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Sales | $ | 564,400 |
| Variable expenses |  | 312,800 |
| Contribution margin |  | 251,600 |
| Fixed expenses |  | 193,800 |
| Net operating income | $ | 57,800 |

|  |
| --- |
|  |

If the company's sales increase by 19%, its net operating income should increase by about: **(Round your intermediate calculations to 2 decimal places.)**

A) 10%

B) 19%

C) 83%

D) 186%

212) Dietrick Corporation produces and sells two products. Data concerning those products for the most recent month appear below:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Product B32L | | | Product K84B | | | |
| Sales | $ | 46,000 |  | | $ | 27,000 |  | |
| Variable expenses | $ | 13,800 |  | | $ | 14,670 |  | |

Fixed expenses for the entire company were $42,550.

The break-even point for the entire company is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $42,550

B) $71,020

C) $69,754

D) $30,450

213) Dietrick Corporation produces and sells two products. Data concerning those products for the most recent month appear below:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Product B32L | | | Product K84B | | | |
| Sales | $ | 46,000 |  | | $ | 27,000 |  | |
| Variable expenses | $ | 13,800 |  | | $ | 14,670 |  | |

Fixed expenses for the entire company were $42,550.

If the sales mix were to shift toward Product B32L with total sales remaining constant, the overall break-even point for the entire company:

A) could increase or decrease.

B) would decrease.

C) would not change.

D) would increase.

214) Ingrum Corporation produces and sells two products. In the most recent month, Product R38T had sales of $20,000 and variable expenses of $7,400. Product X08S had sales of $39,000 and variable expenses of $6,170. The fixed expenses of the entire company were $41,160.

The break-even point for the entire company is closest to:

A) $41,160

B) $17,840

C) $53,455

D) $54,730

215) Ingrum Corporation produces and sells two products. In the most recent month, Product R38T had sales of $20,000 and variable expenses of $7,400. Product X08S had sales of $39,000 and variable expenses of $6,170. The fixed expenses of the entire company were $41,160.

If the sales mix were to shift toward Product R38T with total sales remaining constant, the overall break-even point for the entire company:

A) would not change.

B) would increase.

C) would decrease.

D) could increase or decrease.

216) In July, Meers Corporation sold 3,700 units of its only product. Its total sales were $107,300, its total variable expenses were $66,600, and its total fixed expenses were $34,800.

Required:

a. Construct the company's contribution format income statement for July.

b. Redo the company's contribution format income statement assuming that the company sells 3,400 units.

217) Mcconkey Corporation produces and sells a single product. The company's contribution format income statement for July appears below:

|  |  |  |
| --- | --- | --- |
|  | Sales (5,500 units) | $357,500 |
|  | Variable expenses | 236,500 |
|  | Contribution margin | 121,000 |
|  | Fixed expenses | 102,200 |
|  | Net operating income | $18,800 |

Required:

Redo the company's contribution format income statement assuming that the company sells 5,800 units.

218) Giannini Inc., which produces and sells a single product, has provided the following contribution format income statement for March:

|  |  |  |
| --- | --- | --- |
|  | Sales (5,900 units) | $477,900 |
|  | Variable expenses | 206,500 |
|  | Contribution margin | 271,400 |
|  | Fixed expenses | 190,800 |
|  | Net operating income | $80,600 |

Required:

Redo the company's contribution format income statement assuming that the company sells 5,500 units.

219) Mechem Corporation produces and sells a single product. In April, the company sold 2,100 units. Its total sales were $205,800, its total variable expenses were $107,100, and its total fixed expenses were $82,400.

Required:

a. Construct the company's contribution format income statement for April.

b. Redo the company's contribution format income statement assuming that the company sells 2,200 units.

220) Certosimo Corporation has provided the following contribution format income statement. All questions concern situations that are within the relevant range.

|  |  |  |
| --- | --- | --- |
|  | Sales (7,000 units) | $350,000 |
|  | Variable expenses | 245,000 |
|  | Contribution margin | 105,000 |
|  | Fixed expenses | 97,500 |
|  | Net operating income | $7,500 |

Required:

a. If sales increase to 7,040 units, what would be the estimated increase in net operating income?

b. If sales decline to 6,900 units, what would be the estimated net operating income?

221) Muzzillo Corporation has provided the following contribution format income statement. All questions concern situations that are within the relevant range.

|  |  |  |
| --- | --- | --- |
|  | Sales (3,000 units) | $180,000 |
|  | Variable expenses | 126,000 |
|  | Contribution margin | 54,000 |
|  | Fixed expenses | 52,200 |
|  | Net operating income | $1,800 |

Required:

a. If the selling price increases by $4 per unit and the sales volume decreases by 300 units, what would be the estimated net operating income?

b. If the variable cost per unit increases by $6, spending on advertising increases by $3,000, and unit sales increase by 1,800 units, what would be the estimated net operating income?

222) Montesdeoca Corporation has provided the following contribution format income statement. All questions concern situations that are within the relevant range.

|  |  |  |
| --- | --- | --- |
|  | Sales (2,000 units) | $120,000 |
|  | Variable expenses | 72,000 |
|  | Contribution margin | 48,000 |
|  | Fixed expenses | 33,600 |
|  | Net operating income | $14,400 |

Required:

a. If sales decline to 1,900 units, what would be the estimated net operating income?

b. If the selling price increases by $4 per unit and the sales volume decreases by 200 units, what would be the estimated net operating income?

c. What is the break-even point in dollar sales?

223) Sattler Corporation has provided the following contribution format income statement. All questions concern situations that are within the relevant range.

|  |  |  |
| --- | --- | --- |
|  | Sales (8,000 units) | $480,000 |
|  | Variable expenses | 336,000 |
|  | Contribution margin | 144,000 |
|  | Fixed expenses | 142,200 |
|  | Net operating income | $1,800 |

Required:

a. What is the contribution margin per unit?

b. What is the variable expense ratio?

c. If sales decline to 7,900 units, what would be the estimated net operating income?

d. If the variable cost per unit increases by $5, spending on advertising increases by $2,000, and unit sales increase by 3,400 units, what would be the estimated net operating income?

e. What is the break-even point in dollar sales?

f. Estimate how many units must be sold to achieve a target profit of $50,400.

g. What is the margin of safety percentage?

h. Using the degree of operating leverage, what is the estimated percent increase in net operating income of a 15% increase in sales?

224) Laraia Corporation has provided the following contribution format income statement. All questions concern situations that are within the relevant range.

|  |  |  |
| --- | --- | --- |
|  | Sales (3,000 units) | $150,000 |
|  | Variable expenses | 90,000 |
|  | Contribution margin | 60,000 |
|  | Fixed expenses | 48,000 |
|  | Net operating income | $12,000 |

Required:

a. What is the contribution margin per unit?

b. What is the contribution margin ratio?

c. What is the variable expense ratio?

d. If sales increase to 3,050 units, what would be the estimated increase in net operating income?

e. If sales decline to 2,900 units, what would be the estimated net operating income?

f. If the selling price increases by $4 per unit and the sales volume decreases by 200 units, what would be the estimated net operating income?

g. If the variable cost per unit increases by $5, spending on advertising increases by $3,000, and unit sales increase by 450 units, what would be the estimated net operating income?

h. What is the break-even point in unit sales?

i. What is the break-even point in dollar sales?

j. Estimate how many units must be sold to achieve a target profit of $54,000.

k. What is the margin of safety in dollars?

l. What is the margin of safety percentage?

m. What is the degree of operating leverage?

n. Using the degree of operating leverage, what is the estimated percent increase in net operating income of a 15% increase in sales?

225) Zaccaria Corporation has provided the following contribution format income statement. All questions concern situations that are within the relevant range.

|  |  |  |
| --- | --- | --- |
|  | Sales (5,000 units) | $300,000 |
|  | Variable expenses | 240,000 |
|  | Contribution margin | 60,000 |
|  | Fixed expenses | 58,800 |
|  | Net operating income | $1,200 |

Required:

a. What is the contribution margin ratio?

b. If sales increase to 5,040 units, what would be the estimated increase in net operating income?

c. If the selling price increases by $4 per unit and the sales volume decreases by 400 units, what would be the estimated net operating income?

d. What is the break-even point in unit sales?

e. What is the margin of safety in dollars?

f. What is the degree of operating leverage?

226) Stonebraker Corporation has provided the following contribution format income statement. All questions concern situations that are within the relevant range.

|  |  |  |
| --- | --- | --- |
|  | Sales (9,000 units) | $270,000 |
|  | Variable expenses | 189,000 |
|  | Contribution margin | 81,000 |
|  | Fixed expenses | 77,400 |
|  | Net operating income | $3,600 |

Required:

a. If sales increase to 9,040 units, what would be the estimated increase in net operating income?

b. If the variable cost per unit increases by $6, spending on advertising increases by $3,000, and unit sales increase by 19,200 units, what would be the estimated net operating income?

c. Estimate how many units must be sold to achieve a target profit of $26,100.

227) Mancine Corporation has provided the following contribution format income statement. All questions concern situations that are within the relevant range.

|  |  |  |
| --- | --- | --- |
|  | Sales (3,000 units) | $150,000 |
|  | Variable expenses | 90,000 |
|  | Contribution margin | 60,000 |
|  | Fixed expenses | 42,000 |
|  | Net operating income | $18,000 |

Required:

a. What is the break-even point in unit sales?

b. Estimate how many units must be sold to achieve a target profit of $50,000.

228) Sun Corporation has provided the following contribution format income statement. All questions concern situations that are within the relevant range.

|  |  |  |
| --- | --- | --- |
|  | Sales (5,000 units) | $250,000 |
|  | Variable expenses | 162,500 |
|  | Contribution margin | 87,500 |
|  | Fixed expenses | 71,750 |
|  | Net operating income | $15,750 |

Required:

a. What is the margin of safety in dollars?

b. What is the degree of operating leverage?

229) Langin Corporation has provided the following contribution format income statement. All questions concern situations that are within the relevant range.

|  |  |  |
| --- | --- | --- |
|  | Sales (9,000 units) | $540,000 |
|  | Variable expenses | 324,000 |
|  | Contribution margin | 216,000 |
|  | Fixed expenses | 204,000 |
|  | Net operating income | $12,000 |

Required:

a. What is the margin of safety percentage?

b. Using the degree of operating leverage, what is the estimated percent increase in net operating income of a 15% increase in sales?

230) The management of Merklin Corporation expects sales in May to be $105,000. The company's contribution margin ratio is 70% and its fixed monthly expenses are $48,000.

Required:

Estimate the company's net operating income for May, assuming that the fixed monthly expenses do not change. Show your work!

231) Sarratt Corporation's contribution margin ratio is 62% and its fixed monthly expenses are $91,000. Assume that the company's sales for May are expected to be $193,000.

Required:

Estimate the company's net operating income for May, assuming that the fixed monthly expenses do not change. Show your work!

232) Huitron Inc. expects its sales in September to be $143,000. The company's contribution margin ratio is 65% and its fixed monthly expenses are $62,000.

Required:

Estimate the company's net operating income for September, assuming that the fixed monthly expenses do not change. Show your work!

233) Hamiel Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Per Unit | Percent of Sales |
|  | Selling price | $240 | 100% |
|  | Variable expenses | 168 | 70% |
|  | Contribution margin | $72 | 30% |

Fixed expenses are $301,000 per month. The company is currently selling 5,000 units per month.

Required:

The marketing manager would like to introduce sales commissions as an incentive for the sales staff. The marketing manager has proposed a commission of $16 per unit. In exchange, the sales staff would accept an overall decrease in their salaries of $68,000 per month. The marketing manager predicts that introducing this sales incentive would increase monthly sales by 200 units. What should be the overall effect on the company's monthly net operating income of this change? Show your work!

234) Data concerning Wislocki Corporation's single product appear below:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Per Unit | Percent of Sales |
|  | Selling price | $130 | 100% |
|  | Variable expenses | 26 | 20% |
|  | Contribution margin | $104 | 80% |

Fixed expenses are $466,000 per month. The company is currently selling 6,000 units per month.

Required:

The marketing manager would like to introduce sales commissions as an incentive for the sales staff. The marketing manager has proposed a commission of $11 per unit. In exchange, the sales staff would accept an overall decrease in their salaries of $55,000 per month. The marketing manager predicts that introducing this sales incentive would increase monthly sales by 100 units. What should be the overall effect on the company's monthly net operating income of this change? Show your work!

235) Naumann Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Per Unit | Percent of Sales |
|  | Selling price | $100 | 100% |
|  | Variable expenses | 30 | 30% |
|  | Contribution margin | $70 | 70% |

Fixed expenses are $234,000 per month. The company is currently selling 4,000 units per month.

Required:

Management is considering using a new component that would increase the unit variable cost by $7. Since the new component would improve the company's product, the marketing manager predicts that monthly sales would increase by 500 units. What should be the overall effect on the company's monthly net operating income of this change if fixed expenses are unaffected? Show your work!

236) Data concerning Neuner Corporation's single product appear below:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Per Unit | Percent of Sales |
|  | Selling price | $220 | 100% |
|  | Variable expenses | 88 | 40% |
|  | Contribution margin | $132 | 60% |

Fixed expenses are $425,000 per month. The company is currently selling 4,000 units per month.

Required:

The marketing manager would like to cut the selling price by $11 and increase the advertising budget by $23,700 per month. The marketing manager predicts that these two changes would increase monthly sales by 400 units. What should be the overall effect on the company's monthly net operating income of this change? Show your work!

237) Bethard Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Per Unit | Percent of Sales |
|  | Selling price | $120 | 100% |
|  | Variable expenses | 24 | 20% |
|  | Contribution margin | $96 | 80% |

Fixed expenses are $354,000 per month. The company is currently selling 5,000 units per month.

Required:

The marketing manager would like to cut the selling price by $8 and increase the advertising budget by $23,000 per month. The marketing manager predicts that these two changes would increase monthly sales by 600 units. What should be the overall effect on the company's monthly net operating income of this change? Show your work!

238) Data concerning Cavaluzzi Corporation's single product appear below:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Per Unit | Percent of Sales |
|  | Selling price | $110 | 100% |
|  | Variable expenses | 44 | 40% |
|  | Contribution margin | $66 | 60% |

Fixed expenses are $440,000 per month. The company is currently selling 8,000 units per month.

Required:

The marketing manager believes that an $8,000 increase in the monthly advertising budget would result in a 150 unit increase in monthly sales. What should be the overall effect on the company's monthly net operating income of this change? Show your work!

239) Shelhorse Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Per Unit | Percent of Sales |
|  | Selling price | $140 | 100% |
|  | Variable expenses | 56 | 40% |
|  | Contribution margin | $84 | 60% |

Fixed expenses are $275,000 per month. The company is currently selling 4,000 units per month.

Required:

The marketing manager believes that a $13,000 increase in the monthly advertising budget would result in a 150 unit increase in monthly sales. What should be the overall effect on the company's monthly net operating income of this change? Show your work!

240) Data concerning Milian Corporation's single product appear below:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Per Unit | Percent of Sales |
|  | Selling price | $130 | 100% |
|  | Variable expenses | 39 | 30% |
|  | Contribution margin | $91 | 70% |

Fixed expenses are $66,000 per month. The company is currently selling 1,000 units per month.

Required:

Management is considering using a new component that would increase the unit variable cost by $15. Since the new component would improve the company's product, the marketing manager predicts that monthly sales would increase by 200 units. What should be the overall effect on the company's monthly net operating income of this change if fixed expenses are unaffected? Show your work!

241) Cleghorn Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |
| --- | --- | --- |
|  | Selling price per unit | $160.00 |
|  | Variable expense per unit | $70.40 |
|  | Fixed expense per month | $153,216 |

Required:

Determine the monthly break-even in total dollar sales. Show your work!

242) Hamernik, Inc., produces and sells a single product whose selling price is $240.00 per unit and whose variable expense is $72.00 per unit. The company's fixed expense is $372,960 per month.

Required:

Determine the monthly break-even in either unit or total dollar sales. Show your work!

243) Frisch Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |
| --- | --- | --- |
|  | Selling price per unit | $170.00 |
|  | Variable expense per unit | $83.30 |
|  | Fixed expense per month | $138,720 |

Required:

Determine the monthly break-even in either unit or total dollar sales. Show your work!

244) Yamakawa Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |
| --- | --- | --- |
|  | Selling price per unit | $200.00 |
|  | Variable expense per unit | $64.00 |
|  | Fixed expense per month | $670,480 |

Required:

Determine the monthly break-even in unit sales. Show your work!

245) Liz, Inc., produces and sells a single product. The product sells for $130.00 per unit and its variable expense is $48.10 per unit. The company's monthly fixed expense is $223,587.

Required:

Determine the monthly break-even in unit sales. Show your work!

246) Malensek International, Inc., produces and sells a single product. The product sells for $240.00 per unit and its variable expense is $55.20 per unit. The company's monthly fixed expense is $249,480.

Required:

Determine the monthly break-even in total dollar sales. Show your work!

247) Brihon Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |
| --- | --- | --- |
|  | Selling price per unit | $230.00 |
|  | Variable expense per unit | $103.50 |
|  | Fixed expense per month | $518,650 |

Required:

a. Assume the company's monthly target profit is $12,650. Determine the unit sales to attain that target profit. Show your work!

b. Assume the company's monthly target profit is $63,250. Determine the dollar sales to attain that target profit. Show your work!

248) The contribution margin ratio of Kuck Corporation's only product is 75%. The company's monthly fixed expense is $585,000 and the company's monthly target profit is $11,250.

Required:

Determine the dollar sales to attain the company's target profit. Show your work!

249) Rachal Corporation produces and sells a single product whose selling price is $150.00 per unit and whose variable expense is $57.00 per unit. The company's monthly fixed expense is $381,300.

Required:

a. Assume the company's monthly target profit is $9,300. Determine the unit sales to attain that target profit. Show your work!

b. Assume the company's monthly target profit is $18,600. Determine the dollar sales to attain that target profit. Show your work!

250) Bussy Corporation produces and sells a single product whose contribution margin ratio is 54%. The company's monthly fixed expense is $561,600 and the company's monthly target profit is $34,560.

Required:

Determine the dollar sales to attain the company's target profit. Show your work!

251) Hawver Corporation produces and sells a single product. Data concerning that product appear below:

|  |  |  |
| --- | --- | --- |
|  | Selling price per unit | $180.00 |
|  | Variable expense per unit | $81.00 |
|  | Fixed expense per month | $594,000 |

Required:

Assume the company's monthly target profit is $19,800. Determine the unit sales to attain that target profit. Show your work!

252) The selling price of Old Corporation's only product is $180.00 per unit and its variable expense is $37.80 per unit. The company's monthly fixed expense is $483,480.

Required:

Assume the company's monthly target profit is $56,880. Determine the unit sales to attain that target profit. Show your work!

253) Dickus Corporation's only product sells for $100 per unit. Its current sales are 35,600 units and its break-even sales are 29,192 units.

Required:

Compute the margin of safety in both dollars and as a percentage of sales.

254) Haslem Inc. has provided the following data concerning its only product:

|  |  |  |
| --- | --- | --- |
|  | Selling price | $100 per unit |
|  | Current sales | 37,300 units |
|  | Break-even sales | 26,483 units |

Required:

Compute the margin of safety in both dollars and as a percentage of sales.

255) Knezevich Corporation makes a product that sells for $230 per unit. The product's current sales are 36,900 units and its break-even sales are 32,103 units.

Required:

Compute the margin of safety in both dollars and as a percentage of sales.

256) Lubke Corporation's contribution format income statement for the most recent month follows:

|  |  |  |
| --- | --- | --- |
|  | Sales | $506,000 |
|  | Variable expenses | 236,500 |
|  | Contribution margin | 269,500 |
|  | Fixed expenses | 241,700 |
|  | Net operating income | $27,800 |

Required:

a. Compute the degree of operating leverage to two decimal places.

b. Using the degree of operating leverage, estimate the percentage change in net operating income that should result from a 3% increase in sales.

257) Mcquage Corporation has provided its contribution format income statement for July.

|  |  |  |
| --- | --- | --- |
|  | Sales | $558,000 |
|  | Variable expenses | 306,900 |
|  | Contribution margin | 251,100 |
|  | Fixed expenses | 209,800 |
|  | Net operating income | $41,300 |

Required:

a. Compute the degree of operating leverage to two decimal places.

b. Using the degree of operating leverage, estimate the percentage change in net operating income that should result from a 19% increase in sales.

258) In the most recent month, Sardella Corporation's total contribution margin was $46,200 and its net operating income $13,200.

Required:

a. Compute the degree of operating leverage to two decimal places.

b. Using the degree of operating leverage, estimate the percentage change in net operating income that should result from a 10% increase in sales.

259) Brancati Inc. produces and sells two products. Data concerning those products for the most recent month appear below:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Product W07C | Product B29Z |
|  | Sales | $25,000 | $27,000 |
|  | Variable expenses | $7,000 | $8,600 |

Fixed expenses for the entire company were $32,860.

Required:

a. Determine the overall break-even point for the company in total sales dollars. Show your work!

b. If the sales mix shifts toward Product W07C with no change in total sales, what will happen to the break-even point for the company? Explain.

260) Veren Inc. produces and sells two products. During the most recent month, Product F73A's sales were $27,000 and its variable expenses were $9,450. Product L75P's sales were $14,000 and its variable expenses were $5,310. The company's fixed expenses were $21,060.

Required:

a. Determine the overall break-even point for the company in total sales dollars. Show your work!

b. If the sales mix shifts toward Product F73A with no change in total sales, what will happen to the break-even point for the company? Explain.