

Sample Solutions:

Exam – Managerial Accounting (2021)

Case 1 (18 points)

a) 2 points

Breakeven point in units = $\$46,200 / (\$6.60 - \$5.28) = 35,000$ units

b) 4 points

Operating income = $\$13,028.40 / 0.70 = \$18,612$

$\$18,612 + \$46,200 = \$64,812$

Contribution per unit = $\$6.60 - \$5.28 = \$1.32$

Breakeven sales in units = $\$64,812 / \$1.32 = 49,100$ units

Breakeven sales = $49,100 \text{ units} \times \$6.60 = \$324,060$

c) 3 points

Operating income = $\$18,480 / 0.70 = \$26,400$

$\$26,400 + \$46,200 = \$72,600$

Breakeven sales in units = $\$72,600 / \$1.32 = 55,000$ units

d) 3 points

New break even point: $\$46,200 / (\$6.30 - \$5.28) = 55,000$ units

e) 2 points

No, the new break even point is higher than old sales plus additional sales

f) 4 points

- Selling price is constant throughout the entire relevant range.
- Costs are linear over the relevant range.
- In multi-product companies, the sales mix is constant.
- In manufacturing firms, inventories do not change (units produced = units sold).

Case 2 (22 points)

a) 4 points

Variable costing: Variable COGS per Unit: $\$22.10$, only variable manufacturing costs are included when using variable costing for cost of goods sold.

Absorption costing: Absorption COGS per Unit : $\$35.10$, variable manufacturing costs and fixed manufacturing costs have to be considered

b) 2 points

The variable cost of goods sold = $\$22.10 \times 1,750 \text{ units} = \$38,675$

c) 6 points

Total sales = $\$97.50 \times 1,750 = \$170,625$

Variable cost of goods sold = $\$22.10 \times 1,750 = \$38,675$

Variable marketing costs = $\$3.90 \times 1,750 = \$6,825$

Total variable costs = $\$45,500$

Contribution margin = $\$170,625 - \$45,500 = \$125,125$

d) 6 points

Contribution margin = $\$170,625 - \$45,500 = \$125,125$

The fixed costs component = $(2,000 \text{ units} \times (\$13 + \$19.50)) = \$65,000$

Therefore, the operating income under variable costing = $\$125,125 - \$65,000 = \$60,125$

e) 4 points

No effect on cost of goods sold but operating income decreases by 5000\$.