

ABC Company manufactures and markets a number of products. Management is considering the future of a new product which has not been as profitable as planned. Because this product is manufactured and marketed independently from the other products, its total costs can be precisely measured. The plan for the next year calls for a selling price of \$50 per unit. The forecasted variable cost is \$35 per unit. The fixed costs for the year are expected to total \$75,000 up to a maximum capacity of 10,000 units.

Required:

1. Calculate the break even point in terms of units and sales dollars.
2. Prepare a Cost-Volume-Profit chart for the product. Use 10,000 as the maximum units and \$500,000 as the maximum sales dollars.
3. Prepare a Statement of Earnings at break even.
4. Determine the after-tax income assuming sales of \$400,000 and a tax rate of 35%
5. Determine the sales in dollars assuming after tax income of \$39,000 and tax rate of 35%.

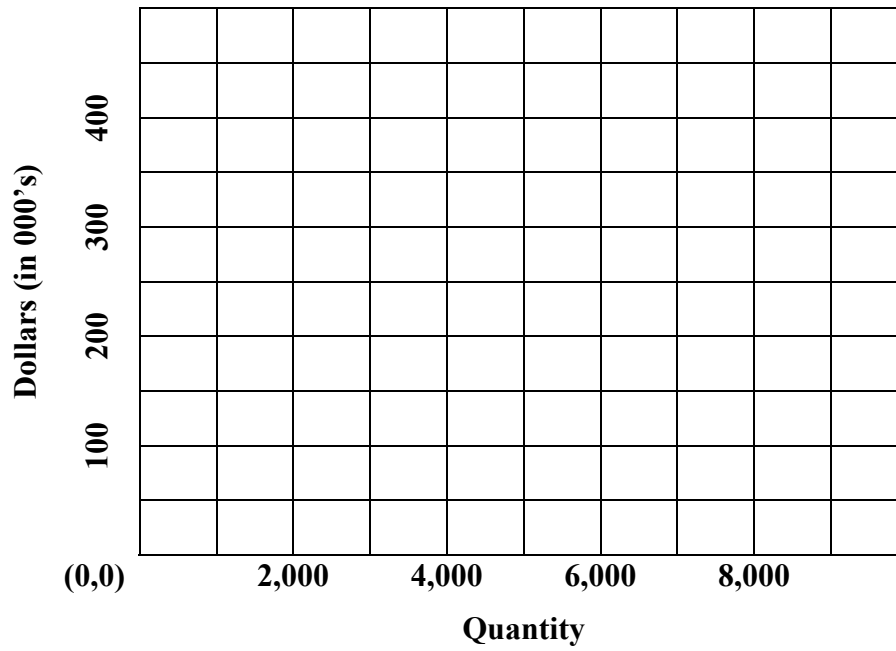
Working Paper:

Part 1

Break Even in Units = Fixed Cost / Contribution Margin =

Break Even in Sales Dollars = Fixed Cost / Contribution Rate =

Part 2



Part 3

ABC Company
Statement of Earnings at Break Even

Parts 4

Sales	
Variable Cost	
Contribution Margin	
Fixed Cost	
Income from Operations	
Tax	
Net Income	

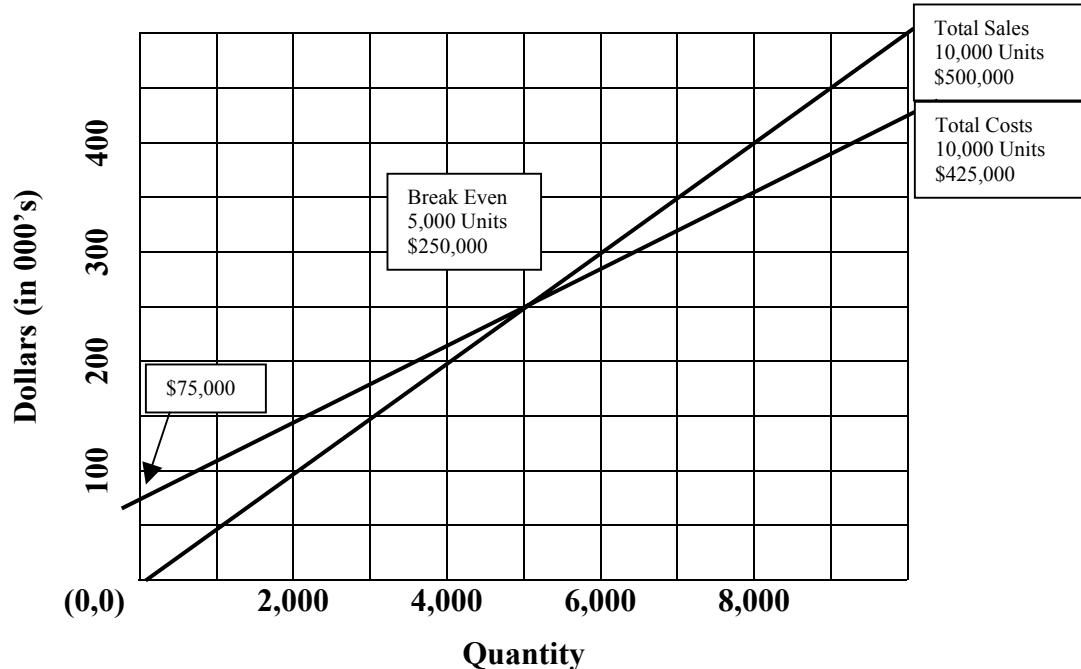
Parts 5

Sales	
Variable Cost	
Contribution Margin	
Fixed Cost	
Income from Operations	
Tax	
Net Income	

Answer:**Part 1**

Break Even in Units = Fixed Cost / Contribution Margin = \$75,000 / \$15 = 5,000 Units

Break Even in Sales Dollars = Fixed Cost / Contribution Rate = \$75,000 / 30% = \$250,000

Part 2**Total Sales Line:**

Minimum **0 Units** at \$50 = \$0

Maximum **10,000 Units** at \$50 = \$50,000

Total Cost Line:

Minimum Variable Cost = **0 Units** at \$35 = 0

Fixed Cost = 75,000

Total Cost = **75,000**

Maximum Variable Cost = **10,000 Units** at \$35 = 350,000

Fixed Cost = 75,000

Total Cost = **425,000**

Part 3

ABC Company
Statement of Earnings at Break Even

Sales (5,000 Units @ \$50)		250,000
Costs:		
Variable Cost (5,000 Units @ \$35)	175,000	
Fixed Cost	75,000	250,000
Net Income		0

Parts 4

Sales	400,000
Variable Cost	
Contribution Margin (400,000 x 30%)	120,000
Fixed Cost	75,000
Income from Operations	45,000
Tax	
Net Income (45,000 x 65%)	29,250

Parts 5

Sales (135,000 / 30%)	450,000
Variable Cost	
Contribution Margin	135,000
Fixed Cost	75,000
Income from Operations (39,000 / 65%)	60,000
Tax	
Net Income	39,000