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 $320 per unit. The forecasted variable cost is $120 per unit. The fixed costs for the year are expected to total $200,000 up to a maximum capacity of 2,500 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 2,500 as the maximum units and $800,000 as the maximum sales dollars.
3. Prepare a Statement of Earnings at break even.
4. Determine the after-tax income assuming sales of $800,000 and a tax rate of 30%
5. Determine the sales in dollars assuming after tax income of $154,000 and tax rate of 30%.

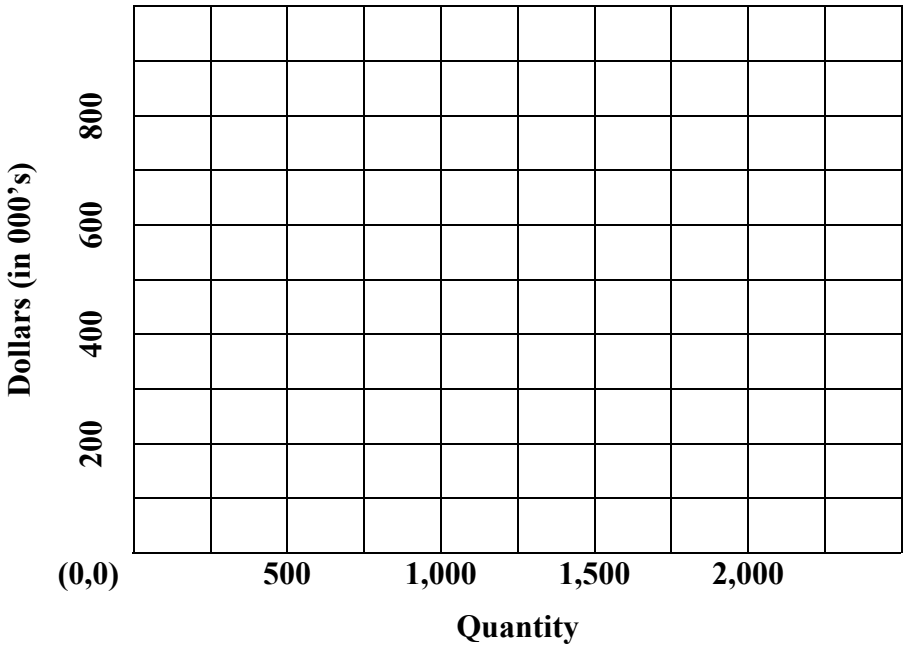
Working Paper:

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

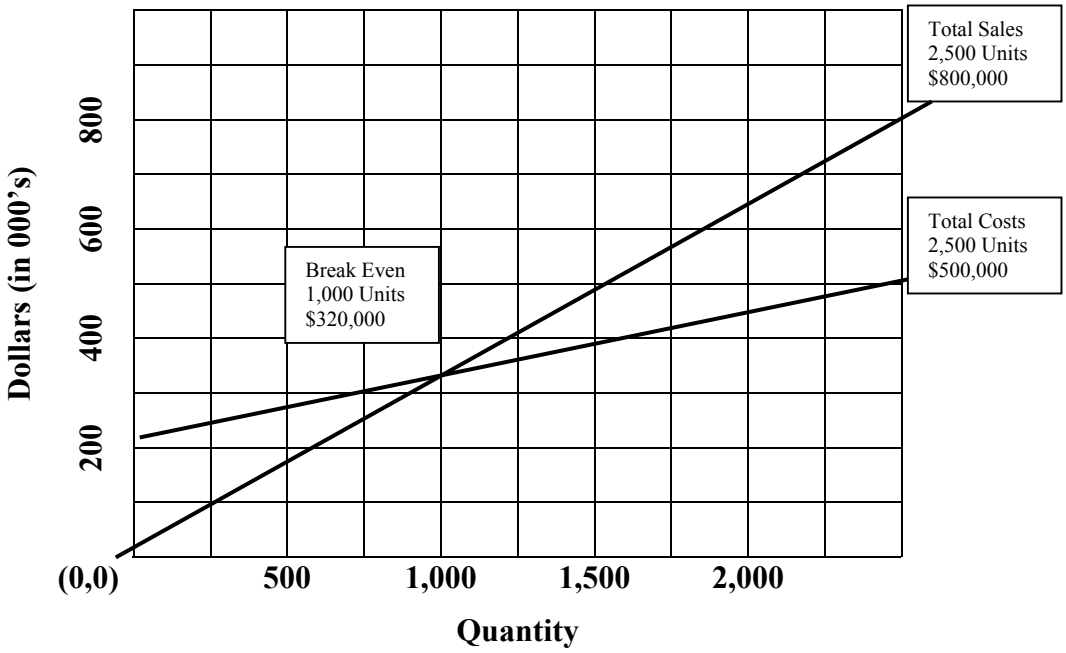
Sales	
Variable Cost	
Contribution Margin	
Fixed Cost	
Income from Operations	
Tax	
Net Income	

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 = $200,000 / $200 = 1,000 Units
Break Even in Sales Dollars = Fixed Cost / Contribution Rate = $200,000 / 62.5% = $320,000

Part 2



Total Sales Line:
Minimum **0 Units** at $320 = **$0**
Maximum **2,500 Units** at $320 = **$800,000**

Total Cost Line:

Minimum	Variable Cost = **0 Units** at $120 =	0
	Fixed Cost =	200,000
	Total Cost =	**200,000**
Maximum	Variable Cost = **2,500 Units** at $120 =	300,000
	Fixed Cost =	200,000
	Total Cost =	**500,000**

Part 3

ABC Company
Statement of Earnings at Break Even

Sales (1,000 Units @ $320)		320,000
Costs:		
Variable Cost (1,000 Units @ $120)	120,000	
Fixed Cost	200,000	320,000
Net Income		0

Parts 4

Sales	800,000
Variable Cost	
Contribution Margin (800,000 x 62.5%)	500,000
Fixed Cost	200,000
Income from Operations	300,000
Tax	
Net Income (300,000 x 70%)	**210,000**

Parts 5

Sales (420,000 / 62.5%)	**672,000**
Variable Cost	
Contribution Margin	420,000
Fixed Cost	200,000
Income from Operations (154,000 / 70%)	220,000
Tax	
Net Income	154,000