1. Austin Manufacturing had the following operating data for the year just ended.

   Selling price per unit  $60 per unit
   Variable expense per unit  $22 per unit
   Fixed expense  $504,000

Management plans to improve the quality of its only product by: (1) replacing a component that costs $3.50 with a higher-grade component that costs $5.50; and (2) renting a packing machine for $18,000 a year. If the desired target profit is $288,000, the company must sell:

A) 19,300 units.
B) 21,316 units.
C) 22,500 units.
D) 20,842 units.

Use the following to answer questions 2-3:

Paxton Corp has provided the following data concerning its operations last month:

Sales  $400,000
Variable expenses  250,000
Fixed expenses  100,000

Paxton Corp is a retailing organization.

2. The break-even sales in dollars is (round to the nearest dollar):
   A) $148,148.
   B) $266,667.
   C) $333,333.
   D) $350,000.

3. The contribution margin ratio is:
   A) 12.5%.
   B) 33.0%.
   C) 25.0%.
   D) 37.5%.
4. Kern Company prepared the following tentative budget for next year:

Sales $500,000
Selling price $5 per unit
Variable expenses $300,000
Fixed expenses $150,000

The sales manager argues that the unit selling price could be increased by 20%, with an expected volume decrease of only 10%. If Kern incorporates these changes in its budget, what should be the budgeted net income?

A) $66,000
B) $90,000
C) $120,000
D) $145,000

5. North Company sells a single product. The product has a selling price of $30 per unit and variable expenses of 70% of sales. If the company's fixed expenses total $60,000 per year, then it will have a break-even of:

A) $60,000.
B) $85,714.
C) $42,000.
D) $200,000.

6. The following is last month's contribution format income statement:

Sales (10,000 units) $1,200,000
Less variable expenses 800,000
Contribution margin 400,000
Less fixed expenses 240,000
Net income $ 160,000

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

A) 0 units
B) 12,000 units
C) 6,000 units
D) 8,000 units
7. The following data pertain to Wistron Company's two products:

<table>
<thead>
<tr>
<th></th>
<th>Product X</th>
<th>Product Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales in dollars</td>
<td>$100,000</td>
<td>$80,000</td>
</tr>
<tr>
<td>Contribution margin ratio</td>
<td>48%</td>
<td>30%</td>
</tr>
</tbody>
</table>

If fixed expenses for the company as a whole are $60,000 and the product mix is constant, the overall break-even point for the company would be:
A) $150,000.
B) $153,846.
C) $100,000.
D) $132,000.

8. Dodero Company produces a single product which sells for $100 per unit. Fixed expenses total $12,000 per month, and variable expenses are $60 per unit. The company's sales average 500 units per month. Which of the following statements is correct?
A) The company's break-even point is $12,000 per month.
B) The fixed expenses remain constant at $24 per unit for any activity level within the relevant range.
C) The company's contribution margin ratio is 40%.
D) Responses a, b, and c are all correct.

9. Carver Company produces a product which sells for $30. Variable manufacturing costs are $15 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 10% of the selling price is paid on each unit sold. The contribution margin per unit is:
A) $ 3.
B) $15.
C) $ 8.
D) $12.

10. If the fixed expenses of a product increase while variable expenses and the selling price remain constant, what will happen to the total contribution margin and the break-even point?

<table>
<thead>
<tr>
<th>Contribution margin</th>
<th>Break-even point</th>
</tr>
</thead>
<tbody>
<tr>
<td>A) Increase</td>
<td>Decrease</td>
</tr>
<tr>
<td>B) Decrease</td>
<td>Increase</td>
</tr>
<tr>
<td>C) Unchanged</td>
<td>Increase</td>
</tr>
<tr>
<td>D) Unchanged</td>
<td>Unchanged</td>
</tr>
</tbody>
</table>
Answer Key -- Quiz Chapter 6 Fall 1999 – version 1

1. C 22,500 units.
   Format: Multiple Choice
   Difficulty: Medium
   Type: CMA adapted
   Origin: Chapter 6, Cost-Volume-Profit ......68

2. B $266,667.
   Format: Multiple Choice
   Difficulty: Medium
   Type: (None)
   Origin: Chapter 6, Cost-Volume-Profit ......106
   Refer To: Ref. 6-7

3. D 37.5%.
   Format: Multiple Choice
   Difficulty: Medium
   Type: (None)
   Origin: Chapter 6, Cost-Volume-Profit ......105
   Refer To: Ref. 6-7

4. C $120,000
   Format: Multiple Choice
   Difficulty: Medium
   Type: CPA adapted
   Origin: Chapter 6, Cost-Volume-Profit ......69

5. D $200,000.
   Format: Multiple Choice
   Difficulty: Easy
   Type: (None)
   Origin: Chapter 6, Cost-Volume-Profit ......41

6. C 6,000 units
   Format: Multiple Choice
   Difficulty: Easy
   Type: (None)
   Origin: Chapter 6, Cost-Volume-Profit ......61

7. A $150,000.
   Format: Multiple Choice
   Difficulty: Medium
   Type: (None)
   Origin: Chapter 6, Cost-Volume-Profit ......57
8. C The company's contribution margin ratio is 40%.
   Format: Multiple Choice
   Difficulty: Medium
   Type: (None)
   Origin: Chapter 6, Cost-Volume-Profit ......40

   Format: Multiple Choice
   Difficulty: Easy
   Type: (None)
   Origin: Chapter 6, Cost-Volume-Profit ......52

10. C Unchanged Increase
    Format: Multiple Choice
     Difficulty: Medium
     Type: CPA adapted
     Origin: Chapter 6, Cost-Volume-Profit ......20