Problem 5-21A
Part 1

Cost of goods sold  Variable ($60/unit)
Advertising expense  Fixed
Shipping expense  Mixed (changes)
Salaries and commissions  Mixed (changes)
Insurance expense  Fixed
Depreciation expense  Fixed

Part 2 – Compute the High/Low Difference

<table>
<thead>
<tr>
<th></th>
<th>Shipping Units</th>
<th>Shipping Expense</th>
<th>Salaries Units</th>
<th>Salaries Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>High level</td>
<td>5,000</td>
<td>$38,000</td>
<td>90,000</td>
<td></td>
</tr>
<tr>
<td>Low level</td>
<td>4,000</td>
<td>34,000</td>
<td>78,000</td>
<td></td>
</tr>
<tr>
<td>Change</td>
<td>1,000</td>
<td>$ 4,000</td>
<td>$12,000</td>
<td></td>
</tr>
</tbody>
</table>

Part 2 – Variable Cost

Change in Cost ÷ Change in Activity
Shipping: $4,000 ÷ 1,000 units = $4/unit
Salaries: $12,000 ÷ 1,000 units = $12/unit
Part 2 – Fixed Cost

High level activity cost – variable cost

<table>
<thead>
<tr>
<th></th>
<th>Shipping</th>
<th>Salaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>High level cost</td>
<td>$38,000</td>
<td>$90,000</td>
</tr>
<tr>
<td>Variable cost</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5,000 units x $4/unit</td>
<td>20,000</td>
<td>60,000</td>
</tr>
<tr>
<td>Fixed Cost</td>
<td>$18,000</td>
<td>$30,000</td>
</tr>
</tbody>
</table>

Part 2 – Cost Formula

Form is \( Y = a + bX \)

- \( a = \) Total fixed cost ($18,000 for shipping; $30,000 for salaries)
- \( b = \) Variable cost per unit ($4/unit for shipping; $12/unit for salaries)
- \( X = \) Number of units

Shipping: \( Y = 18,000 + 4X \)
Salaries: \( Y = 30,000 + 12X \)

Part 3 Contribution Income Statement

Morrisey & Brown, Ltd.
Income Statement
For the month ended September 30

Sales (5,000 units x $100/unit) $500,000

Less variable expenses
Cost of goods sold (5,000 units x $60/unit) $300,000
Shipping expense (5,000 units x $4/unit) 20,000
Salaries expense (5,000 units x $12/unit) 60,000

Contribution Margin $120,000

Less fixed expenses
Advertising 21,000
Shipping 18,000
Salaries 30,000
Insurance 6,000
Depreciation 15,000

Net Income $ 30,000