1. WP Company produces products X, Y, and Z from a single raw material input in a joint
   production process. Budgeted data for the next month is as follows:

<table>
<thead>
<tr>
<th></th>
<th>X</th>
<th>Y</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units produced</td>
<td>1,500</td>
<td>2,000</td>
<td>3,000</td>
</tr>
<tr>
<td>Per unit sales value at split-off</td>
<td>$19</td>
<td>$21</td>
<td>$24</td>
</tr>
<tr>
<td>Added processing costs per unit</td>
<td>$7</td>
<td>$7.50</td>
<td>$7</td>
</tr>
<tr>
<td>Per unit sales value if processed further</td>
<td>$29</td>
<td>$29</td>
<td>$30</td>
</tr>
</tbody>
</table>

   The cost of the joint raw material input is $149,000. Which of the products should be
   processed beyond the split-off point?

   X | Y | Z
   A) yes | yes | no
   B) no  | yes | no
   C) yes | no  | yes
   D) no  | yes | yes

2. The manufacturing capacity of Jordan Company's facilities is 30,000 units a year. A
   summary of operating results for last year follows:

   |                                 |       |
   | Sales (18,000 units @ $100)     | $1,800,000 |
   | Variable costs                  | 990,000   |
   | Contribution margin             | 810,000   |
   | Fixed costs                     | 495,000   |
   | Net operating income            | $ 315,000 |

   A foreign distributor has offered to buy 15,000 units at $90 per unit next year. Jordan
   expects its regular sales next year to be 18,000 units. If Jordan accepts this offer and
   rejects some business from regular customers so as not to exceed capacity, what would be
   the total net operating income next year? (Assume that the total fixed costs would be the
   same no matter how many units are produced and sold.)

   A) $390,000.
   B) $705,000.
   C) $840,000.
   D) $855,000.

3. The SP Company makes 40,000 motors to be used in the production of its sewing
   machines. The average cost per motor at this level of activity is:

   Direct materials | $5.50
   Direct labor     | $5.60
   Variable factory overhead | $4.75
An outside supplier recently began producing a comparable motor that could be used in the sewing machine. The price offered to SP Company for this motor is $18. If SP Company decides not to make the motors, there would be no other use for the production facilities and total fixed factory overhead costs would not change. If SP Company decides to continue making the motor, how much higher or lower would net income be than if the motors are purchased from the outside supplier? Assume that direct labor is a variable cost in this company.

A) $276,000 higher.
B) $86,000 higher.
C) $92,000 lower.
D) $178,000 higher.

4. Consider the following production and cost data for two products, L and C:

<table>
<thead>
<tr>
<th></th>
<th>Product L</th>
<th>Product C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contribution margin per unit</td>
<td>$130</td>
<td>$120</td>
</tr>
<tr>
<td>Machine set-ups needed per unit</td>
<td>10 set-ups</td>
<td>8 set-ups</td>
</tr>
</tbody>
</table>

The company can only perform 65,000 machine set-ups each period due to limited skilled labor and there is unlimited demand for each product. What is the largest possible total contribution margin that can be realized each period?

A) $845,000.
B) $975,000.
C) $910,000.
D) $1,820,000.

5. Relay Corporation manufactures batons. Relay can manufacture 300,000 batons a year at a variable cost of $750,000 and a fixed cost of $450,000. Based on Relay's predictions for next year, 240,000 batons will be sold at the regular price of $5.00 each. In addition, a special order was placed for 60,000 batons to be sold at a 40% discount off the regular price. Total fixed costs would be unaffected by this order. By what amount would the company's net operating income be increased or decreased as a result of the special order?

A) $60,000 decrease.
B) $30,000 increase.
C) $36,000 increase.
D) $180,000 increase.

6. The Wyeth Company produces three products, A, B, and C, from a single raw material input. Product A can be sold at the split-off point for $40,000, or it can be processed further at a total cost of $15,000 and then sold for $58,000. Joint product costs total
$60,000 annually. Product A should be:
A) discontinued since revenues after further processing are less than total joint product costs.
B) sold at the split-off point.
C) processed further and then sold.
D) processed further only if its share of the total joint product costs is less than the incremental revenues from further processing.

7. Manor Company plans to discontinue a department that has a contribution margin of $25,000 and $50,000 in fixed costs. Of the fixed costs, $21,000 cannot be eliminated. The effect on the profit of Manor Company of discontinuing this department would be:
A) a decrease of $4,000.
B) an increase of $4,000.
C) a decrease of $25,000.
D) an increase of $25,000.

8. Products A, B, and C are produced from a single raw material input. The raw material costs $90,000, from which 5,000 units of A, 10,000 units of B, and 15,000 units of C can be produced each period. Product A can be sold at the split-off point for $2 per unit, or it can be processed further at a cost of $12,500 and then sold for $5 per unit. Product A should be:
A) sold at the split-off point, since further processing would result in a loss of $0.50 per unit.
B) processed further, since this will increase profits by $2,500 each period.
C) sold at the split-off point, since further processing will result in a loss of $2,500 each period.
D) processed further, since this will increase profits by $12,500 each period.

9. The Cook Company has two divisions--Eastern and Western. The divisions have the following revenues and expenses:

<table>
<thead>
<tr>
<th></th>
<th>Eastern</th>
<th>Western</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>$550,000</td>
<td>$500,000</td>
</tr>
<tr>
<td>Variable costs</td>
<td>275,000</td>
<td>200,000</td>
</tr>
<tr>
<td>Direct fixed costs</td>
<td>180,000</td>
<td>150,000</td>
</tr>
<tr>
<td>Allocated corporate costs</td>
<td>170,000</td>
<td>135,000</td>
</tr>
<tr>
<td>Net income (loss)</td>
<td>(75,000)</td>
<td>15,000</td>
</tr>
</tbody>
</table>

The management of Cook is considering the elimination of the Eastern Division. If the Eastern Division were eliminated, the direct fixed costs associated with this division could be avoided. However, corporate costs would still be $305,000 in total. Given these data, the elimination of the Eastern Division would result in an overall company net income (loss) of:
A) $15,000.
B) ($155,000).
C) ($75,000).
D) ($60,000).

10. The following standard costs pertain to a component part manufactured by Ashby Company:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials</td>
<td>$2</td>
</tr>
<tr>
<td>Direct labor</td>
<td>$5</td>
</tr>
<tr>
<td>Manufacturing overhead</td>
<td>$20</td>
</tr>
<tr>
<td>Standard cost per unit</td>
<td>$27</td>
</tr>
</tbody>
</table>

The company can purchase the part from an outside supplier for $25 per unit. The manufacturing overhead is 60% fixed and this fixed portion would not be affected by this decision. Assume that direct labor is an avoidable cost in this decision. What is the relevant amount of the standard cost per unit to be considered in a decision of whether to make the part internally or buy it from the external supplier?

A) $2
B) $15
C) $19
D) $27
Answer Key -- Quiz Chapter 13

1. A yes yes no
   Format: Multiple Choice
   Difficulty: Medium
   Type: (None)
   Origin: Chapter 13, Relevant Costs for .......45

2. B $705,000.
   Format: Multiple Choice
   Difficulty: Medium
   Type: CPA adapted
   Origin: Chapter 13, Relevant Costs for .......26

3. B $86,000 higher.
   Format: Multiple Choice
   Difficulty: Medium
   Type: (None)
   Origin: Chapter 13, Relevant Costs for .......40

4. B $975,000.
   Format: Multiple Choice
   Difficulty: Medium
   Type: (None)
   Origin: Chapter 13, Relevant Costs for .......42

5. B $30,000 increase.
   Format: Multiple Choice
   Difficulty: Medium
   Type: CPA adapted
   Origin: Chapter 13, Relevant Costs for .......25

6. C processed further and then sold.
   Format: Multiple Choice
   Difficulty: Easy
   Type: (None)
   Origin: Chapter 13, Relevant Costs for .......44

7. B an increase of $4,000.
   Format: Multiple Choice
   Difficulty: Medium
   Type: (None)
   Origin: Chapter 13, Relevant Costs for .......34

8. B processed further, since this will increase profits by $2,500 each period.
   Format: Multiple Choice
9. B  ($155,000).
   Format: Multiple Choice
   Difficulty: Medium
   Type: (None)
   Origin:  Chapter 13, Relevant Costs for .......33

10. B  $15
    Format: Multiple Choice
    Difficulty: Easy
    Type: CPA adapted
    Origin:  Chapter 13, Relevant Costs for .......39