1) Pointed Pencil company incurs the following costs in its manufacture of pencils. Classify each one of them according to one of the value chain functions:

Functions:
A) Research and Development
B) Design of products, services, and processes.
C) Production
D) Marketing
E) Distribution
F) Customer Service
G) Strategy and Administration

   1) Cost of wood used in manufacture of pencils.
   2) Cost of wood used in packing cartons to ship pencils.
   3) Cost of wood used in display at national trade show.
   4) Depreciation of the wood used in the manufacturing plant.
   5) Salary of the scientists attempting to find another source of writing material.
   6) Cost of customer order forms.
   7) Depreciation of delivery trucks.

2) Elm Table Company manufactures tables. The company uses a budgeted indirect-cost rate for its manufacturing operations, and in 19X9 allocated the following amounts to the work-in-process inventory, finished-goods inventory, and cost-of-goods-sold categories, respectively: $25,000; $75,000; $900,000. The actual overhead incurred was $1,100,000.

Ending balances in the relevant accounts were:

   Work-in-process $ 100,000
   Finished Goods 750,000
   Cost of Goods Sold 24,150,000

Requirements:
A) Prepare a journal entry to write-off the difference between allocated and actual overhead directly to cost of goods sold. Be sure your journal entry closes the related overhead accounts.
B) Prepare a journal entry that prorates the write-off of the difference between allocated and actual overhead using ending account balances.
C) Prepare a journal entry that prorates the write-off of the difference between allocated and actual overhead using overhead amounts allocated during the year to the respective accounts as the rate basis.
The following information will be used for #3 and #4.

Perfect Writer produces and sells boxes of pens for $10.00 per box. Direct materials are $4 per box, and direct manufacturing labor averages $0.75 per box. Variable overhead is $0.25 per box and $125,000 per year. Administrative expenses, all fixed, run $45,000 per year, with sales commissions of $1 per box. Production is expected to be 100,000 boxes, which is met every year. In 19X5, 75,000 boxes were sold.

3) What is the inventoriable cost per box using variable costing?

4) What is the inventoriable cost per box using absorption costing.

5) Key Company manufactures item K for use in its production of keyless locks. The costs per unit when 10,000 items are produced are:

| Direct Materials | $3 |
| Direct Manufacturing labor | $15 |
| Variable manufacturing overhead | $6 |
| Fixed manufacturing overhead | $8 |
| Total | $32 |

Lock Company has offered to sell to Key Company 10,000 units of item K for $30. If Key accepts the offer, the plant facilities could be used to manufacture another part at a savings of $45,000. In addition, $5 per unit of fixed manufacturing overhead of item K could be eliminated.

Requirements:
A) What is the relevant per unit cost of item K?
B) Which alternative is best for Key Company? By how much?

Problems 6-8 are based on the following information pertaining to Arp Co's manufacturing operations:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Materials</td>
<td>$36,000</td>
<td>$30,000</td>
</tr>
<tr>
<td>Work in Process</td>
<td>$18,000</td>
<td>$12,000</td>
</tr>
<tr>
<td>Finished Goods</td>
<td>$54,000</td>
<td>$72,000</td>
</tr>
</tbody>
</table>
Additional information for the month of March 1996:

Direct materials purchased $84,000
Direct manufacturing labor payroll 60,000
Direct Mfg labor rate per hour 7.50
Fac. Overhead rate per DL hour 10.00

6) For the month of March 1996, prime cost was
   A) $90,000
   B) $120,000
   C) $144,000
   D) $150,000

7) For the month of March 1996, conversion cost was:
   A) $90,000
   B) $140,000
   C) $144,000
   D) $170,000

8) For the month of March 1996, cost of good manufactured was:

9) Clay Co. has considerable excess manufacturing capacity. A special job order's cost sheet includes the following applied manufacturing overhead costs:

   Fixed costs $21,000
   Variable costs 33,000

The fixed costs include a normal $3,700 allocation for in-house design costs, although no in-house design will be done. Instead, the job will require the use of external designers costing $7,750. What is the total amount to be included in the calculation to determine the minimum acceptable price for the job?

   A) $36,700
10) Kane Corp. estimates that it would incur a $100,000 cost to prepare a bid proposal. Kane estimates also that there would be an 80% chance of being awarded the contract if the bid is low enough to result in a net profit of $250,000. What amount is the expected value of the payoff?

A) $0  
B) $150,000  
C) $180,000  
D) $220,000

11) Which of the following statements is incorrect with regard to activity-based costing systems?

A) ABC eliminates activities that produce no value for the customer.  
B) ABC assigns costs to homogenous cost pools that represent specific activities.  
C) ABC identifies causes of delay, excess, and unevenness in all activities.  
D) ABC uses primarily volume-related cost drivers.

12) Explain how you would use zero-based budgeting for you personal finances.

13) Define:

Staff Authority:  
Process Cost Accounting System  
Equivalent Unit