

Instructions:

Solutions must appear on the sheet where the problem appears. You may use Excel to solve the problem but cut and paste onto the Word Document. You may extend the number of sheets as necessary. The objective is to show the solutions directly after the problem which will facilitate grading.

Show all computations**1. (5 POINTS)**

Identify and describe the three strategic positions that lead to business success.

2. (8 points)

Assume the local custom print **shop** has the following information on the number of sales orders received and order-processing costs.

<u>Month</u>	<u>Sales Orders</u>	<u>Order-Processing Costs</u>
Jan	900	\$12,000
Feb	450	8,400
Mar	1,200	19,500
Apr	840	11,700
May	690	9,600
Jun	300	6,000
Jul	600	9,000

Plot the data on a scatter diagram. Using the information from representative high- and low- volume months, and develop a cost-estimating equation for monthly production costs.

3. (16 points)

The STC Supply manufactures memory cards that sell to wholesalers for \$4.00 each. Variable and fixed costs are as follows:

Variable Costs per
card:

Manufacturing	
Direct materials	\$0.60
Direct labor	0.50
Factory overhead	<u>0.50</u>
	\$1.60
Selling and admin.	<u>0.30</u>
Total	\$1.90

Fixed Costs per Month:

Factory overhead	\$14,000
Selling and admin.	<u>6,000</u>
Total	\$20,000

STC Supply produced and sold 20,000 cards during October 2014. There were no beginning or ending inventories.

Required:

- Prepare a contribution income statement for the month of October.
- Determine STC Supply's monthly break-even point in units.
- Determine the effect on monthly profit of a 1,000 unit increase in monthly sales.
- If STC Supply is subject to an income tax of 40 percent, determine the dollar sales volume required to earn a monthly after-tax profit of \$30,000.

4. (9 points)

Regal produces a single product. The company's March 2014 income statement is as follows:

Sales (1,200 x \$120)	\$144,000
Cost of goods sold	<u>- 108,000</u>
Gross profit	\$ 36,000
Selling and administrative	<u>10,000</u>
Net income	<u>\$ 26,000</u>

There were no beginning or ending inventories of work-in-process or finished goods. Regal's full manufacturing costs were as follows:

Direct materials (1,200 units x \$20)	\$ 24,000
Direct labor (1,200 units x \$32)	38,400
Variable manufacturing overhead (1,200 units x \$18)	21,600
Fixed manufacturing overhead	<u>24,000</u>
Total	<u>\$108,000</u>
Average cost per unit	<u>\$90</u>

Selling and administrative expenses are all fixed. Regal just received a special order from a firm in Mexico to purchase 900 units at \$110 each. The order will not affect the selling price to regular customers.

Required:

- Prepare a differential analysis of the relevant costs and revenues associated with the decision to accept or reject the special order, assuming Regal has excess capacity.
- Determine the net advantage or disadvantage (profit increase or decrease) of accepting the order, assuming Regal does not have excess capacity.

5. (6 points)

Elm Paper Corporation manufactures 20,000 rolls of paper each period. The paper is used as an input for producing several other products that Elm manufactures. The full manufacturing costs for a batch of 100 rolls of paper are as follows:

Direct materials	\$ 270
Direct labor	200
Variable manufacturing overhead	200

Average fixed manufacturing overhead	<u>375</u>
Total	<u>\$1,045</u>

The fixed manufacturing overhead is comprised of depreciation expenses related to prior investments in facilities and equipment that are used in the manufacturing of the paper. These assets have no other use than for the manufacturing of the paper. An outside supplier has offered to sell Elm the 20,000 rolls of paper necessary to meet production needs this period for a lump-sum of \$145,000.

What should Elm do if it wants to maximize its profit for the period?

6. (20 points)

The Viking Manufacturing Company produces products A, B, and C. Although Viking could sell up to 50 units of A, 60 units of B, and 50 units of C each week, a limitation of 400 machine-hours per week prevents Viking from meeting these sales demands. The product information is as follows:

	A	B	C
Unit selling price	\$240	\$140	\$160
Variable manufacturing costs:	\$164	\$73	\$102
Variable selling and admin. costs	\$10	\$10	\$10
Machine-hours per unit	3	3	4

There are no fixed selling or administrative expenses. Fixed manufacturing costs are \$3,000 per week.

Required:

- Develop a schedule indicating the order in which Viking should allocate machine-hours to each product.
- Develop a schedule indicating the number of units of each product that Viking should produce each week.
- Develop a schedule indicating Viking's weekly profit or loss from implementing this production schedule.

Answer:

7. (21 points)

Lion Company has identified the following overhead costs and cost drivers for next year:

<u>Overhead Item</u>	<u>Expected Costs</u>	<u>Cost Driver</u>	<u>Maximum Quantity</u>
Setup costs	\$1,166,400	Number of setups	4,800
Ordering costs	540,000	Number of orders	40,000
Maintenance	1,856,000	Machine-hours	64,000
Power	180,000	Kilowatt-hours	400,000

The following are two of the jobs completed during the year:

	<u>Job 201</u>	<u>Job 202</u>
Direct materials	\$18,000	\$20,000
Direct labor	\$24,000	15,000
Units completed	750	600
Direct labor-hours	180	220
Number of setups	12	15
Number of orders	16	30
Machine-hours	360	300
Kilowatt-hours	180	240

Determine the unit cost for each job using the four cost drivers. (Round amounts to 2 decimal places.)

8. (11 points)

Troy Corporation has the following budgeted sales for the selected four-month period:

<u>Month</u>	<u>Unit Sales</u>
October	80,000
November	140,000
December	100,000
January	120,000

There were 38,000 units of finished goods in inventory at the beginning of October. Plans are to have an inventory of finished product equal to 25 percent of the unit sales for the next month.

Five pounds of a single raw material are required for each unit produced. Each pound of material costs \$10. Plans are to have inventory levels for materials equal to 30 percent of the amount of materials needed to satisfy next month's production and 168,000 units of raw material on hand at the end of December. Materials inventory on October 1 was 120,000 pounds.

Required:

- Prepare a production budget in units for October and November.
- Prepare a purchase budget in pounds and dollars for October and November.

9. (9 points)

Sales for July, August, and September are expected to be \$200,000, \$180,000, and \$220,000, respectively, for Petemouse Company. All sales are on account (terms 2/15, net 30 days) and are collected 60 percent in the month of the sale and 40 percent in the following month. One-half of all sales discounts are taken on the average. Raw materials are purchased one month before being needed, and all purchases and expenses are paid for as incurred. Activities for the quarter are expected to be:

	<u>July</u>	<u>August</u>	<u>September</u>
Raw materials used	\$40,000	\$36,000	\$44,000
Salaries	70,000	68,000	92,000
Maintenance and repairs	18,000	18,000	18,000
Depreciation	36,000	36,000	36,000
Utilities and other	14,000	14,000	15,000
Dividends paid	-0-	10,000	-0-
Payment on bonds	8,000	8,000	8,000

Required: Using the given information, prepare a cash budget for August.

10. (15 points)

EMJB Company sells three products with the following seasonal sales pattern:

Products:

<u>Quarter</u>	<u>A</u>	<u>B</u>	<u>C</u>
1	40%	30%	10%
2	30%	20%	40%
3	20%	20%	40%
4	10%	30%	10%
Total	100%	100%	100%

The annual sales budget shows forecasts for the different products and their expected selling price per unit as follows:

<u>Product</u>	<u>Units</u>	<u>Selling Price</u>
A	200,000	\$10
B	160,000	40
C	400,000	16

Required: Prepare a sales budget in units and dollars by quarters for the company for the coming year.