

**Managerial Accounting Midterm 1 Review Questions****Question 1**

Guelph Manufacturing produces metal picture frames. The company's income statements for the last two years are presented below:

	Last Year	This Year
Units Sold	60,000	80,000
Sales	\$850,000	\$1,200,000
Less: Cost of goods sold	<u>600,000</u>	<u>750,000</u>
Gross margin	250,000	450,000
Less: Operating expenses	<u>150,000</u>	<u>180,000</u>
Net income	<u>\$100,000</u>	<u>\$270,000</u>

The company has no beginning or ending inventories.

Required:

- Estimate the company's total variable cost per unit, and its total fixed costs per year. (Remember that this is a manufacturing firm.)
- Compute the company's contribution margin for this year.

**Question 2**

Tanner Company's most recent contribution format income statement is presented below:

Sales	\$75,000
<i>Less: Variable Expenses</i>	<u>\$45,000</u>
Contribution Margin	\$30,000
<i>Less: Fixed Expenses</i>	<u>\$36,000</u>
Net Loss	<u>\$(6,000)</u>

The company sells its only product for \$15 per unit. There were no beginning or ending inventories.

Required:

- Compute the company's break-even point in units sold.
- Compute the total variable expenses at the break-even point.
- How many units would have to be sold to earn a target profit of \$9,000?
- The sales manager is convinced that a \$6,000 increase in the advertising budget would increase total sales by \$25,000. Would you advise the increased advertising outlay?

**Question 3**

Ontario Company, which has only one product, has provided the following data concerning its most recent month of operations:

Selling price	\$110
Units in beginning inventory	0
Units produced	4,600
Units sold	4,200
Units in ending inventory	400
Variable costs per unit:	
Direct materials	\$46
Direct labour	28
Variable manufacturing overhead	5
Variable selling and administrative	10
Fixed costs:	
Fixed manufacturing overhead	\$55,200
Fixed selling and administrative	25,200

Required:

- What is the unit product cost for the month under variable costing?
- Prepare an income statement for the month using the variable costing method.
- Without preparing an income statement, determine the absorption costing net income for the month.

**Question 4**

The following data pertain to Harrier Company's operations during October:

	Oct 1	Oct 31
Raw materials inventory	\$ -	\$ 5,000
Work in process inventory	?	\$ 4,000
Finished goods inventory	\$ 12,000	?

## Other data:

Cost of goods manufactured	\$ 105,000
Raw materials used	\$ 40,000
Manufacturing overhead costs	\$ 20,000
Direct labour costs	\$ 39,000
Gross profit	\$ 100,000
Sales	\$ 210,000

1. What was the beginning work in process inventory?
2. What was the ending finished goods inventory?

**Question 5**

Technology, Inc., has a job-order costing system. The company uses predetermined overhead rates in applying manufacturing overhead cost to individual jobs. The predetermined overhead rate in Department A is based on machine hours, and the rate in Department B is based on direct materials cost. At the beginning of the most recent year, the company's management made the following estimates for the year:

	<u>Department</u>	
	<u>A</u>	<u>B</u>
Machine-hours	70,000	19,000
Direct labour-hours	30,000	60,000
Direct materials cost	\$195,000	\$282,000
Direct labour cost	\$260,000	\$520,000
Manufacturing overhead cost	\$420,000	\$705,000

Job 243 entered into production on April 1 and was completed on May 12. The company's cost records show the following information about the job:

	<u>Department</u>	
	<u>A</u>	<u>B</u>
Machine-hours	250	60
Direct labour-hours	70	120
Direct materials cost	\$840	\$1,100
Direct labour cost	\$610	\$880

At the end of the year, the records of Technology showed the following actual cost and operating data for all jobs worked on during the year:

	<u>Department</u>	
	<u>A</u>	<u>B</u>
Machine-hours	61,000	20,000
Direct labour-hours	28,000	66,000
Direct materials cost	\$156,000	\$284,000
Manufacturing overhead cost	\$385,000	\$705,000

Required:

- a) Compute the predetermined overhead rates for Department A and Department B.
- b) Compute the total overhead cost applied to Job 243.
- c) Compute the amount of under-applied or over-applied overhead in each department at the end of the current year.

**Question 6**

Guelph Hardwood Floors installs oak and other hardwood floors in homes and businesses. The company uses an activity-based costing system for its overhead costs. The company has provided the following data concerning its annual overhead costs and its activity-based costing system:

Overhead Costs:

Production Overhead	\$	190,000
Office Expense	\$	140,000
Total	\$	<u>330,000</u>

Distribution of Resource Consumption:

	Activity Cost Pools			<u>Total</u>
	<u>Installing Floors</u>	<u>Job Support</u>	<u>Other</u>	
Production Overhead	40%	40%	20%	100%
Office Expense	10%	60%	30%	100%

The "Other" activity cost pool consists of the costs of idle capacity and organization-sustaining costs. The amount of activity for the year is as follows:

<u>Activity Cost Pools</u>	<u>Annual Activity</u>
Installing Floors	200 squares
Job Support	160 jobs
Other	Not applicable

A "square" is a measure of area that is roughly equivalent to 1,000 square metres.

Required:

- a) Prepare the first-stage allocation of overhead costs to the activity cost pools by filling in the table below:

	<u>Installing Floors</u>	<u>Job Support</u>	<u>Other</u>	<u>Total</u>
Production Overhead				
Office Expense				
Total				

- b) Compute the activity rates (i.e., cost per unit of activity) for the Installing Floors and Job Support activity cost pools by filling in the table below:

	<u>Installing Floors</u>	<u>Job Support</u>
Production Overhead		
Office Expense		
Total		

- c) Compute the overhead cost, according to the activity-based costing system, of a job that involves installing 3.4 squares.

**Question 7**

United Parcel, Inc. operates a local parcel delivery service. The company keeps detailed records relating to operating costs of trucks, and has found that if a truck is driven 100,000 kilometres per year, the operating cost is 8.5 cents per kilometre. This cost increases to 9.25 cents per kilometre if a truck is driven 60,000 kilometres per year.

Required:

Estimate the cost formula for truck operating costs using the high-low method.