

**Multiple Choice Questions**

1. What is the primary difference between a static budget and a flexible budget?
  - a) The static budget contains only fixed costs, while the flexible budget contains only variable costs.
  - b) The static budget is adjusted for different activity levels, while a flexible budget is prepared for a single level of activity.
  - c) The static budget is prepared for a single level of activity, while a flexible budget is adjusted for different activity levels.
  - d) Both the static budget and the flexible budget are adjusted for different activity levels.
  
2. M Company prepared a static budget of 50,000 direct labor hours, with estimated overhead costs of \$250,000 for variable overhead and \$60,000 for fixed overhead. Trepid then prepared a flexible budget at 38,000 labor hours. How much is total overhead costs at this level of activity?
  - a) \$190,000
  - b) \$247,000
  - c) \$250,000
  - d) \$260,000
  
3. W Company uses flexible budgets. At normal capacity of 10,000 units, budgeted manufacturing overhead is: \$50,000 variable and \$135,000 fixed. If W Company had actual overhead costs of \$187,500 for 11,000 units produced, what is the difference between actual and flexible budget costs?
  - a) \$2,500 unfavorable
  - b) \$2,500 favorable
  - c) \$4,500 unfavorable
  - d) \$6,000 favorable
  
4. A profit center is responsible for which activities?
  - a) Costs only
  - b) Costs and the revenue generated by those costs
  - c) Costs and any revenue generated by the company
  - d) Costs, revenue, and assets purchased for revenue generation
  
5. Decentralization means
  - a) Control of operations is delegated to many managers throughout the organization.
  - b) Control of operations is delegated to top management.
  - c) Control of operations is delegated for controlling variable costs.
  - d) Control of operations is delegated for controlling fixed costs.
  
6. A responsibility report show the following information
  - a) Sales- variable costs- fixed costs= net income.
  - b) Sales- controllable variable costs- fixed costs= controllable margin.
  - c) Sales- variable costs- controllable fixed costs= controllable margin.
  - d) Sales- controllable variable costs- controllable fixed costs= net income.

7. Arbor Co. has a controllable margin of \$120,000 on revenues of \$800,000. Average invested assets were \$600,000. Arbor requires a 15% minimum rate of return. What is the ROI?
- a) 8%
  - b) 10%
  - c) 12%
  - d) 20%
8. Arbor Co. has a controllable margin of \$120,000 on revenues of \$800,000. Average invested assets were \$600,000. Arbor requires a 15% minimum rate of return. What is the residual income?
- a) \$0
  - b) \$30,000
  - c) \$40,000
  - d) \$200,000
9. Which of the following will not improve ROI?
- a) Increasing sales
  - b) Increasing average operating assets
  - c) Increasing Controllable margin
  - d) Decreasing Costs
10. Reviews that are based primarily on the differences between actual results and planned objectives is called:
- a) Behavior principles
  - b) Management by exception
  - c) materiality
  - d) responsibility accounting

<b>Practice Problems</b>
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**Practice Problem #1**

A partially completed flexible overhead budget for S Company is shown below:

<u>Cost Formula</u>	<u>Activity Level in Units</u>		
	<u>8,000</u>	<u>12,000</u>	<u>16,000</u>
Variable overhead:			
Supplies		\$108,000	
Utilities		60,000	
Repairs		24,000	
Total variable overhead		\$192,000	
Fixed overhead:			
Depreciation		\$15,000	
Salaries		96,000	
Rent		44,000	
Total fixed overhead		\$155,000	
Total overhead		\$347,000	

Required: Fill in the missing data.

**Practice Problem #2:**

J Company's has provided the following information regarding June's results.

	<u>Revenue and Cost</u>	<u>Actual Results</u>
	<u>Formula</u>	
- Conversion costs	\$3.25/unit	7,000
Salaries	\$8,000	7,600
Utilities	\$600 + \$0.50/unit	1,550
Rent	\$5,000	5,000
Miscellaneous	\$800 + \$0.80/unit	2,500

- Required:
- a) Prepare the company's flexible budget assuming that 2,000 units were manufactured.
  - b) Assume that 2,100 units were actually manufactured. Prepare the flexible budget for this level of activity. Determine Favorable or Unfavorable Differences

**Practice Problem #3**

T Company recently prepared a manufacturing cost budget for an output of 50,000 units for one of their cost centers, as follows:

Direct materials	\$100,000
Direct labor	50,000
Controllable variable overhead	75,000
Noncontrollable overhead	100,000

Actual units produced amounted to 60,000. Actual costs incurred were direct materials, \$110,000; direct labor, \$60,500; controllable overhead, \$85,000; and noncontrollable overhead, \$97,000.

Required: If T Company evaluated performance by the use of a flexible budget, prepare a responsibility report showing the differences.

### **Practice Problem #4**

The H Company manufactures basketballs. Last year's sales were \$700,000, controllable margin was \$100,000, and average operating assets were \$800,000.

Required:

- If next year's sales are unchanged and expenses and average operating assets are reduced by 10%, compute current year and next year's ROI.
- If the minimum required rate of return is 6%, what will be the residual income in the current year and next year?

### **Solutions**

- C
- C
- B
- B
- A
- C
- D
- B
- B
- B

**Solution #1**

	<u>Cost Formula</u>	<u>Activity Level in Units</u>		
		<u>8,000</u>	<u>12,000</u>	<u>16,000</u>
Variable overhead:				
Supplies	\$9.00	\$72,000	\$108,000	\$144,000
Utilities	\$5.00	40,000	60,000	80,000
Repairs	\$2.00	16,000	24,000	32,000
Total variable overhead		<u>\$128,000</u>	<u>\$192,000</u>	<u>\$256,000</u>
Fixed overhead:				
Depreciation		\$15,000	\$15,000	\$15,000
Salaries		96,000	96,000	96,000
Rent		44,000	44,000	44,000
Total fixed overhead		<u>\$155,000</u>	<u>\$155,000</u>	<u>\$155,000</u>
Total overhead		<u>\$283,000</u>	<u>\$347,000</u>	<u>\$411,000</u>

Variable overhead cost formula = variable overhead cost / activity level

Fixed overhead costs do not change as the level of activity changes.

**Solution #2**

		<u>Flexible Budget</u>	<u>Actual</u>	<u>Difference</u>
Budgeted number of units sold		2,000	2,000	
Expenses:				
Conversion costs	\$3.25/unit	6,500	7,000	500 U
Salaries	\$8,000	8,000	7,600	400 F
Utilities	\$.50/unit+\$600	1,600	1,550	50 F
Rent	\$5,000	5,000	5,000	0
Miscellaneous	\$.80/unit+\$800	2,400	2,500	100 U
Total costs		<u>\$23,500</u>	<u>\$23,650</u>	<u>150 U</u>

**Solution #3**

	<u>Cost Formula based on 50,000 units</u>	<u>Flexible Budget based on 60,000 units</u>	<u>Actual</u>	<u>Difference F-Favorable U-Unfavorable</u>
<u>Controllable Costs</u>				
Direct materials	\$2.00	\$120,000	\$110,000	\$10,000 F
Direct labor	\$1.00	60,000	60,500	500 U
Controllable overhead	\$1.50	90,000	85,000	5,000 F
Total		<u>\$270,000</u>	<u>\$255,500</u>	<u>14,500 F</u>

**Solution#4**

<u>ROI:</u>				
<u>Controllable Margin</u>	<u>\$100,000</u>			
Average operating assets	800,000			<u>= 12.5%</u>

	<u>Last Year</u>	<u>Change</u>	<u>Next Year</u>	
<u>ROI:</u>				
<u>Controllable Margin</u>	<u>\$100,000</u>	<u>\$60,000</u>	<u>\$160,000</u>	
Average operating assets	800,000	(80,000)	720,000	<u>= 22.2%</u>

<u>Change in Income:</u>				
Sales	\$700,000			
Controllable Margin	<u>100,000</u>			
Expenses	600,000			
Decrease %	<u>10%</u>			
Decrease in expenses	\$60,000	= Increase in		
		Controllable Margin		

a)

<u>Residual Income:</u>		
Average operating assets	\$800,000	\$720,000
Minimum rate of return	<u>6%</u>	<u>6%</u>
Minimum required income	\$48,000	\$43,200
Controllable Margin	<u>\$100,000</u>	<u>\$160,000</u>
Residual Income	\$52,000	\$ 116,800