

**EXERCISE 6-1 Variable and Absorption Costing Unit Product Costs [LO1]**

Shastri Bicycle of Bombay, India, produces an inexpensive, yet rugged, bicycle for use on the city's crowded streets that it sells for 500 rupees. (Indian currency is denominated in rupees, denoted by R.) Selected data for the company's operations last year follow:

Units in beginning inventory	0
Units produced	10,000
Units sold	8,000
Units in ending inventory	2,000
Variable costs per unit:	
Direct materials	R120
Direct labor	R140
Variable manufacturing overhead	R50
Variable selling and administrative	R20
Fixed costs:	
Fixed manufacturing overhead	R600,000
Fixed selling and administrative	R400,000

Required:

1. Assume that the company uses absorption costing. Compute the unit product cost for one bicycle.
2. Assume that the company uses variable costing. Compute the unit product cost for one bicycle.

**EXERCISE 6-2 Variable Costing Income Statement; Explanation of Difference in Net Operating Income [LO2]**

Refer to the data in Exercise 6-1 for Shastri Bicycle. The absorption costing income statement prepared by the company's accountant for last year appears below:

Sales	R4,000,000
Cost of goods sold	<u>2,960,000</u>
Gross margin	1,040,000
Selling and administrative expense	<u>560,000</u>
Net operating income	<u>R 480,000</u>

Required:

1. Determine how much of the ending inventory consists of fixed manufacturing overhead cost deferred in inventory to the next period.
2. Prepare an income statement for the year using variable costing. Explain the difference in net operating income between the two costing methods.

**EXERCISE 6-3 Reconciliation of Absorption and Variable Costing Net Operating Incomes [LO3]**

High Tension Transformers, Inc., manufactures heavy-duty transformers for electrical switching stations. The company uses variable costing for internal management reports and absorption costing for external reports to shareholders, creditors, and the government. The company has provided the following data:

	Year 1	Year 2	Year 3
<b>Inventories</b>			
Beginning (units)	180	150	160
Ending (units)	150	160	200
Variable costing net operating income	\$292,400	\$269,200	\$251,800

The company's fixed manufacturing overhead per unit was constant at \$450 for all three years.

Required:

1. Determine each year's absorption costing net operating income. Present your answer in the form of a reconciliation report.
2. In Year 4, the company's variable costing net operating income was \$240,200 and its absorption costing net operating income was \$267,200. Did inventories increase or decrease during Year 4? How much fixed manufacturing overhead cost was deferred or released from inventory during Year 4?

**EXERCISE 6-4 Basic Segmented Income Statement [LO4]**

Caltex, Inc., produces and sells recordable CD and DVD packs. Revenue and cost information relating to the products follow:

	Product	
	CD	DVD
Selling price per pack	\$8.00	\$25.00
Variable expenses per pack	\$3.20	\$17.50
Traceable fixed expenses per year	\$138,000	\$45,000

Common fixed expenses in the company total \$105,000 annually. Last year the company produced and sold 37,500 CD packs and 18,000 DVD packs.

Required:

Prepare a contribution format income statement for the year segmented by product lines.

**(PROBLEM 6-16) Variable and Absorption Costing Unit Product Costs and Income Statements; Explanation of Difference in Net Operating Income [LO1, LO2, LO3]**

Wiengot Antennas, Inc., produces and sells a unique type of TV antenna. The company has just opened a new plant to manufacture the antenna, and the following cost and revenue data have been provided for the first month of the plant's operation in the form of a worksheet.

	A	B	C
1. Beginning inventory		0	
2. Units produced		40,000	
3. Units sold		35,000	
4. Selling price per unit		\$60	
5.			
6. Selling and administrative expenses:			
7. Variable per unit		\$2	
8. Fixed (total)		\$560,000	
9. Manufacturing costs			
10. Direct materials cost per unit		\$15	
11. Direct labor cost per unit		\$7	
12. Variable manufacturing overhead cost per unit		\$2	
13. Fixed manufacturing overhead cost (total)		\$640,000	
14.			

Because the new antenna is unique in design, management is anxious to see how profitable it will be and has asked that an income statement be prepared for the month.

Required:

- Assume that the company uses absorption costing.
  - Determine the unit product cost.
  - Prepare an income statement for the month.
- Assume that the company uses variable costing.
  - Determine the unit product cost.
  - Prepare a contribution format income statement for the month.
- Explain the reason for any difference in the ending inventory balances under the two costing methods and the impact of this difference on reported net operating income.