

CHAPTER 19

True-False:

The following statements are either true or false. Place a (T) in the parentheses before each true statement and an (F) before each false statement.

1. (T) Under absorption costing, direct materials, direct labor, and all manufacturing overhead costs are assigned to products.
2. (T) Under variable costing, direct materials, direct labor, and variable overhead cost are assigned to products.
3. (F) The difference between absorption costing and variable costing is the inclusion in absorption costing of fixed selling expenses. *Fixed OH*
4. (F) Under absorption costing, fixed overhead costs are treated as a period cost. *product*
5. (T) Under variable costing, the total variable costs are first deducted from sales to arrive at contribution margin.
6. (T) Expenses are grouped according to function under the absorption costing method. *GAAP*
7. (F) When quantity produced equals quantity sold, net income is higher under the absorption costing method. *same*
8. (T) Many companies link manager bonuses to income computed under absorption costing.
9. (T) The manager incentive problem can be avoided when income is measured using variable costing.
10. (F) Cost information is not important when setting the price of a product.

Multiple Choice:

- E _____ 1. Under which of the following costing methods are all manufacturing costs assigned to products?
- a. Absorption costing.
 - b. Full costing. *} same*
 - c. Variable costing.
 - d. Fixed costing.
 - e. Both a and b.
- B _____ 2. Under variable costing, which of the following costs will become part of the product cost?
- a. Direct labor, direct materials, variable overhead, and fixed overhead.
 - b. Direct labor, direct materials, and variable overhead.
 - c. Direct labor and direct materials.
 - d. Direct labor, direct materials, and fixed overhead.
 - e. None of the above.

A _____ 3. Compute the inventory unit cost under both the absorption costing and variable costing methods, assuming the following summary cost data:

Direct labor cost	\$10 per unit
Direct materials cost	\$3 per unit
Variable overhead cost	\$250,000
Fixed overhead cost	\$500,000
Expected units produced	125,000 units

- a. Absorption costing \$19; Variable costing \$15.
- b. Absorption costing \$15; Variable costing \$19.
- c. Absorption costing \$13; Variable costing \$15.
- d. Absorption costing \$15; Variable costing \$13.
- e. Absorption costing \$19; Variable costing \$13

GAAP

DM	3
DL	10
FOH	6
	<hr/>
	19

VC

DM	3
DL	10
VOH	2
	<hr/>
	15

Short problem #1:

Vito Corporation, a manufacturer of in-home decorative fountains, began operations on September 1 of the current year. Its cost and sales information for this year follows.

Production costs

Direct materials	\$	35 per unit
Direct labor	\$	55 per unit

Overhead costs for the year

Variable overhead	\$ 4,400,000
Fixed overhead	\$ 6,600,000

$\div 110,000 = 60 \text{ per unit}$
units.

Nonproduction costs for the year

Variable selling and administrative	\$ 800,000
Fixed selling and administrative	\$ 4,500,000

Production and sales for the year

Units produced	110,000 units	} $30,000 \times 60 \text{ per unit} = 1,800,000$ Δ between NI.
Units sold	80,000 units	
Sales price per unit	\$ 360 per unit	

Required: Prepare an income statement using variable costing. Use the form on the next page.

VITO CORPORATION
Variable Costing Income Statement

Do both NI.

Sales	(80,000 * \$360)	\$ 28,800,000
Variable expenses:		
Variable manufacturing expense (1)	\$ 10,400,000	
Variable selling and administrative expense	800,000	
Total variable expenses	11,200,000	
Contribution margin		17,600,000
Fixed expenses:		
Fixed manufacturing expense	6,600,000	
Fixed selling and administrative expense	4,500,000	
Total fixed expenses	11,100,000	
Net income		\$ 6,500,000

(1)	Direct materials	\$	35.00
	Direct labor		55.00
	Variable overhead (\$4.4 million / 110,000)		40.00
	Per unit variable manufacturing cost	\$	130.00
	Multiplied by units sold		80,000
	Variable manufacturing expense	\$	10,400,000

CHAPTER 20

True-False:

The following statements are either true or false. Place a (T) in the parentheses before each true statement and an (F) before each false statement.

1. (T) A company that has a formal budgeting process has clearly established that planning for the future is an important management responsibility.
2. (F) Because budgets are based on many predictions of the future, a performance evaluation is more likely to be useful if it compares actual performance for the most recent period with actual performance from earlier periods instead of comparing the most recent period's performance with budgeted amounts.
3. (F) As a control over its management, the production department should not be allowed to participate in preparing its own budget; otherwise, the department is likely to manipulate the budgeted amounts so that the goals will be easy to meet.
4. (T) If a company prepares a budget each month covering the next twelve one-month periods, it is using continuous budgeting.
5. (F) The production budget should be the first budget prepared for a manufacturing company. *Sales*
6. (T) The final document developed in preparing the master budget is the budgeted balance sheet. ✓
7. (T) A production budget does not include budgeted production costs. These costs are included in the manufacturing budget. *units only*
8. (F) Because interest and income tax expense are the responsibility of a company's top management, they are included in the general and administrative expense budget. *No*
9. (F) The capital expenditures budget is used to plan cash receipts and disbursements with the goal of ensuring that the company has sufficient cash available to meet future operating needs. *Cap budget expenditures*
10. (T) Cash budgets show how much money is to be received from or expended on each activity and when the receipts and expenditures are to occur.

Multiple Choice:

B _____ 1. Playland has budgeted sales of \$34,000 during September. The store expects to begin September with an \$18,700 inventory and end the month with a \$16,500 inventory. Playland's cost of goods sold averages 60% of sales. Determine budgeted purchases for September.

- | | | |
|--------------|--------------------------------------|-----------------|
| a. \$11,400. | Purchases for sales (\$34,000 * 60%) | \$20,400 |
| b. \$18,200. | Desired ending inventory | 16,500 |
| c. \$19,080. | Less beginning inventory | <u>(18,700)</u> |
| d. \$22,600. | Budgeted purchases | \$18,200 |
| e. \$31,800. | | |

A _____ 2. Fabricon Company sells a product called Streamer. Management predicts that the June 30 inventory will consist of 12,000 Streamers. In addition, management predicts that sales for the next three quarters will reach these levels:

Third quarter	26,500 units
Fourth quarter	57,000 units
First quarter (next year)	24,600 units

Management's policy states that the company should end each quarter with a merchandise inventory equal to 40% of the next quarter's budgeted sales.

How many units should Fabricon purchase in the third and fourth quarters to meet this policy?

Q3: $26,500 + (40\% * 57,000) - 12,000 = 37,300$

- | | <i>Third
Quarter</i> | <i>Fourth
Quarter</i> |
|----|--------------------------|---------------------------|
| a. | 37,300 | 44,040 |
| b. | 25,100 | 69,200 |
| c. | 67,800 | 11,640 |
| d. | 30,400 | 75,300 |
| e. | 79,200 | 5,160 |

B _____ 3. Which of the following is true regarding budgeting and human behavior?

- a. The budget process has no effect on employees' attitudes.
- b. The budget process can create a positive effect on employees' attitudes, or it can create a negative effect.
- c. It does not affect most employees as only those in the accounting department are involved.
- d. The goals reflected in the budget should require performance much higher than an "attainable" standard.
- e. None of the above are true.

D _____ 4. Which of the following is not true?

- a. Sales budgets are prepared before cash budgets. **T**
- b. Budgeted balance sheets are dependent on budgeted income statements. **T**
- c. Budgeted income statements include depreciation expense. **T**
- d. Cash budgets include depreciation expense. **No**

e. Inventory to purchase = Budgeted ending inventory + budgeted cost of sales – budgeted beginning inventory.

Short problem #1:

Woody Company budgeted the following cash receipts and cash disbursements from operations for the third quarter of the current year:

	<i>Receipts</i>	<i>Disbursements</i>
July.....	\$100,000	\$ 80,000
August.....	65,000	89,950
September.....	115,000	110,000

According to a credit agreement with the company's bank, Woody Company promises to have a minimum cash balance of \$15,000 at the end of each month. In return, the bank has agreed that the company can borrow up to \$50,000 with interest of 12% per year. Interest must be paid on the last day of each month. The interest is calculated on the beginning balance of the bank loan for the month. In addition, to the extent possible, the principal amount borrowed from the bank must be repaid on the last day of each month. The company is expected to have a cash balance of \$15,000 and a bank loan balance of \$5,000 on July 1.

Required: Prepare monthly cash budgets for the third quarter.

WOODY COMPANY			
Cash Budget			
Third Quarter			
	<i>July</i>	<i>August</i>	<i>September</i>
Beginning cash balance.....	\$15,000	\$29,950	\$15,000
Cash receipts.....	100,000	65,000	115,000
Total.....	115,000	94,950	130,000
Cash disbursements.....	(80,000)	(89,950)	(110,000)
Interest expense.....			
July (\$5,000 x 1%).....	(50)		
August (none).....			
September (\$10,000 x 1%) ...			(100)
Preliminary balance.....	34,950	5,000	19,900
Additional loan from bank.....		10,000	
Repayment of loan to bank.....	(5,000)		(4,900)
Ending cash balance.....	\$29,950	\$15,000	\$15,000
Ending bank loan balance.....	\$ 0	\$10,000	\$ 5,100

Short problem #2:

Volt Company manufactures an innovative automobile transmission for electric cars. Management predicts that ending inventory for the first quarter will be 44,000 units. The following unit sales of the transmissions are expected during the rest of the year: second quarter, 304,000 units; third quarter, 230,000 units; and fourth quarter, 236,500 units. Company policy calls for the ending inventory of a quarter to equal 60% of the next quarter's budgeted sales.

Required: Prepare a production budget for both the second and third quarters that calculates the number of transmissions to manufacture.

VOLT COMPANY
Production Budget
Second and Third Quarters

	Second Quarter	Third Quarter
Budgeted ending inventories	138,000	141,900
Add: budgeted sales	304,000	230,000
Required units available	442,000	371,900
Less: beginning inventories	(44,000)	(138,000)
Units to be produced	398,000	233,900

Short problem #3:

Electro Company manufactures an innovative automobile transmission for electric cars. Management predicts that ending inventory for the first quarter will be 37,500 units. The following unit sales of the transmissions are expected during the rest of the year: second quarter, 213,000 units; third quarter, 499,000 units; and fourth quarter, 248,000 units. Company policy calls for the ending inventory of a quarter to equal 30% of the next quarter's budgeted sales. Each transmission requires 2.5 direct labor hours, at a cost of \$17.6 per hour.

Required: Prepare a direct labor budget for the second quarter.

ELECTRO COMPANY
Production Budget
Second Quarter

Budgeted ending inventories	149,700
Add: budgeted sales	213,000
Required units available	<u>362,700</u>
Less: beginning inventories	<u>(37,500)</u>
Units to be produced	<u><u>325,200</u></u>

ELECTRO COMPANY
Direct Labor Budget
Second Quarter

Budgeted production (units)	325,200
Labor required per unit (hours)	
X	2.5 hrs.
Total labor hours needed	<u>813,000 hrs.</u>
Labor rate per hour	
X	<u>\$ 17.60</u>
Labor dollars	<u><u>\$ 14,308,800</u></u>

ACCT. 102

Chapter 21**True-false:**

The following statements are either true or false. Place a (T) in the parentheses before each true statement and an (F) before each false statement.

1. (F) A fixed budget performance report always compares actual costs with budgeted amounts based on the actual operating level.
2. (F) The same costs are fixed or variable in all businesses. For example, office supply costs are always variable.
3. (T) A flexible budget performance report always compares actual costs with budgeted amounts based on the actual operating level.
4. (F) Standard costs are determined by averaging historical costs that occurred when the company operated within a normal operating range.
5. (T) A variance is favorable if actual cost is below standard cost.
6. (F) A variance is favorable if actual revenue is below standard revenue.
7. (F) A company's standard direct material cost for producing 10 units of a product is \$200 but the actual direct material cost was \$180. We can safely conclude that the \$20 variance must have resulted because the materials price was lower than standard. **Quantity variance?**
8. (T) An unfavorable overhead volume variance is caused by the fact that the plant did not reach the operating level that was expected when the predetermined overhead application rate was selected.
9. (T) A general journal entry to record a standard material cost in the Goods in Process Inventory account and an unfavorable material quantity variance would include a debit to Direct Material Quantity Variance.
10. (T) When variances are recorded in separate accounts, they are closed directly to the Cost of Goods Sold account at the end of the accounting period only if their balances are immaterial.

Multiple-choice:

You are given several words, phrases or numbers to choose from in completing each of the following statements or in answering the following questions. In each case, select the one that best completes the statement or answers the question and place its letter in the answer space provided.

- D _____ 1. Bubbling Waters Company manufactures and sells hot tubs. Which one of the following costs is likely to be fixed?
- a. Fiberglass materials.
 - b. Installation costs.
 - c. Direct labor.
 - d. Monthly rent expense for the factory building.
 - e. None of the above.

A _____ 2. This information describes the results experienced by a manufacturing company:

Standard direct materials (10 lbs. @ \$4/lb.) ..	\$40/unit
Actual direct materials used.....	11,340 lbs.
Direct materials cost variance (favorable)	\$2,400
Actual finished units manufactured	1,080

What is the actual cost of direct materials for the period?

- | | | |
|--------------|---------------------------------------------------|-----------------|
| a. \$40,800. | Standard: 10 lbs. * \$4/lb * 1,080 units = | \$43,200 |
| b. \$42,960. | Less: favorable variance | (2,400) |
| c. \$43,200. | Equals actual costs | \$40,800 |
| d. \$45,600. | | |
| e. \$47,760. | | |

B _____ 3. Lyle Inc. produced 3,700 units of finished product, using 15,000 pounds of raw material. Lyle purchased 16,000 pounds for \$158,400. The material standards for the product are 4 pounds at \$10 per pound. What are the materials quantity variance and materials price variance, respectively?

- a. \$2,000 F; \$1,500 F
- b. \$2,000 U; \$1,500 F
- c. \$2,000 F; \$1,500 J
- d. \$2,000 U; \$1,500 U
- e. None of the above.

Quantity variance:

$$(15,000 \text{ lbs.} - 14,800 * \text{ lbs.}) * \$10 = \$2,000 \text{ U}$$

Price variance:

$$(\$9.90^{**} - \$10) * 15,000 \text{ lbs.} = \$1,500 \text{ F}$$

$$*3,700 \text{ units made} * 4 \text{ lbs./unit} = 14,800 \text{ lbs.}$$

$$**\$158,400 / 16,000 \text{ lbs.} = \$9.90 / \text{lb.}$$

Short Problem

Qty / DM / Price

$(S-A) \times S$ $(S-A) \times A$

lbs price rate qty

$\#15,000 \times 12$ $(4 - 3.90)$

$(180,000 \text{ lbs} - 190,000) \times 4$

10,000 lbs U x 4

40,000 U .10 F x 190,000

19,000 F

21,000 U

DL

price time

$(S-A) \times S$ $(S-A) \times S$ ② 75000

$\#15,000 \times 5$ $(15 - ① 14.80) \times$

75000 - 73000 .20 F X 75000 = 15000 F

2000 F x 15 ① 1,080 units ÷ 73000 = 14.80

30,000 F ② 5 x 15000 = 75000

45,000 F