

The Jerosap corporation produces and sells one product. The company uses the standard absorption costing system with all variances completely expensed as incurred. The unit standard costs, the budgeted and actual income statements for the January 1992 are given in tables 1 and 2. The selling prices, the material and labor costs remained as budgeted. There were no efficiency variances. This means that there are no materials, labor variances. The variable selling expenses vary directly with sales dollars. The company had budgeted to sell 80% of budgeted production in January 1992. For all the following questions assume that the company will not change the normal volume.

Table 1 Standard absorption costs	
Materials	30
Direct Labor	52
Variable overhead	48
Fixed overhead	40
Standard absorption Cost per unit	170

Table 2 Income statement		January 1992	Standard absorption Costing
		Budget 80.00% of production	Actual
Sales		\$400,000	\$300,000
Cost of goods sold (Standard absorption costs)		\$340,000	\$255,000
Overhead Spending variance			\$ 2,000
Production volume variance			\$(10,000)
Gross Margin		\$ 60,000	\$ 37,000
Selling Expenses	Variable	\$ 20,000	\$ 15,000
	Fixed	\$ 12,500	\$ 12,500
	Total	\$ 32,500	\$ 27,500
Income		\$ 27,500	\$ 9,500

Compute

- Budgeted sales units
- Budgeted production units
- Normal volume
- Actual sales
- Actual production
- Increase in inventory (units)
- Increase in inventory (dollar)
- Budgeted fixed overhead
- Variable overhead for actual output
- Overhead spending variance
- Total actual overhead
- Total overhead absorbed by units produced
- Total overhead variance
- Gross margin per unit
- Variable selling expense per unit
- Absorption cost margin per unit for sales

- With production = 2,500 units, production volume variance
- With production = 2,500 units, sales needed to show zero income under absorption costing
- Budgeted inventory increase
- Budgeted and actual income under variable costing
- Actual inventory increase
- Total variable costs and contribution margin per unit
- Sales needed to show zero income under variable costing

Unit absorption cost			\$ 170	per unit
Budgeted standard absorption COGS			\$340,000	
Budgeted sales units	\$ 340,000 /	\$ 170 =	2,000	units
As budgeted sales/budgeted prod.			80.00%	
Budgeted production	2,000 /	80.00% =	2,500	units
As budgeted production volume variance is			\$ -	
Normal volume equals budgeted production			2,500	units
Actual absorption standard COGS			\$255,000	
Actual sales	255,000 /	\$ 170	1,500	units
Production volume variance			\$ (10,000)	
Fixed overhead rate			\$ 40	per unit
Actual Production - Normal volume	\$ (10,000) /	\$ 40 =	(250)	units
Actual production	2,500 +	(250) =	2,250	units
Increase in inventory	2,250 -	1,500 =	750	units
Increase in inventory	750 x	170 =	\$127,500	
Budgeted Fixed overhead	2,500 x	\$ 40	\$100,000	
Variable overhead for actual output			\$108,000	
Overhead spending variance			\$ 2,000	
Total actual overhead			<u>206,000</u>	

Selling price			\$ 200	per unit
Variable selling expense	\$ 20,000 /	2,000 =	\$ 10	per unit
Unit absorption cost			\$ 170	per unit
Absorption cost margin on sales			<u>\$ 20</u>	per unit

Production	Fixed Selling costs	Production Volume Variance	Total 'fixed costs'	Margin \$ 20 =	Breakeven point in Sales	
2,500	\$ (12,500)	\$ -	\$ 12,500		\$ 625	3a
1,875	\$ (12,500)	\$(25,000)	\$ 37,500		\$ 1,875	3b

Income statement - Variable costing		Plan	Actual	
Increase in inventory units		500	750	
\$ Fixed overhead in Incr in inventory	\$ 40	20,000	30,000	
absorption costing income		27,500	9,500	
Variable costing income		7,500	(20,500)	4

Selling price	\$ 200	per unit
Variable selling expense	\$ 10	per unit
Variable manufacturing cost per unit	<u>\$ 130</u>	per unit
Variable cost contribution margin	\$ 60	per unit

Fixed Selling costs	Budgeted Fixed Overhead	Total fixed costs	Breakeven cont margin \$ 60 =	Breakeven point in Sales	
(12,500)	(100,000)	112,500		1,875	5