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VOTRE LIEN AVEC CE QUI COMPTE — CONNECTS YOU TO WHAT MATTERS

ADM 2341X
MANAGERIAL ACCOUNTING
Spring/Summer 2017
Quiz No. 3
Solutions

. . . . . / 20 marks

NAME: _____

STUDENT #: _____

Statement of Academic Integrity:
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Statement to be signed by the student:
I have read the text on academic integrity and I pledge not to have committed or attempted to commit academic fraud in this examination.

Name:_____ (signature)

Note:
A quiz received without the signature of the student will not be graded and will receive a score of zero.

Question No. 1 (10 marks)

ConAgra Inc. produces meat products under brand names such as Swift, Armour, and Butterball. Beef cattle are processed into three types of products produced: steak; hamburger meat; and hides. The average beef steer costs $500. The three products emerge from a process that costs $100 per cow to run. Output can be sold for the following net amounts:

Steak (100 kilograms)	$300
Hamburger (500 kilograms)	500
Hides (120 kilograms)	100
Total	$900

Assume that each of these products can be sold immediately or processed further.

The steak can be the main course in frozen dinners sold under the Healthy Choice label. The vegetables and desserts in the 400 dinners produced from the 100 kilograms of steak would cost $120, and production, sales, and other costs for the 400 dinners would total $350. Each frozen dinner could be sold for $1.90.

The hamburger could be made into frozen Salisbury Steak patties and sold under the Armour label. The only additional cost would be a $200 processing cost for the 500 kilograms of hamburger. Frozen Salisbury Steaks sell wholesale for $1.50 per kilogram.

The hides can be sold before or after tanning. The cost of tanning one hide is $80, and a tanned hide can be sold for $175.

Required:

(a) Which product or products should be sold at the split-off point and which product or products s should be processed further? Support your answer by showing, for each product, the increase or decrease in profit from processing further. (6 marks)

(b) Compute the total operating profit for the company if your plan in requirement (a) above is implemented. (4 marks)

Answer:

(a) Only the hamburger should be processed further because it is the only product whose additional revenue for processing further exceeds the additional cost.

Steaks to frozen dinners:	
Additional revenue from processing further ($760 - $300)	*$460*
Additional cost for processing further ($120 + $350)	*470*
Increase (decrease) in profit from processing further	***$ (10)***
Hamburger to Salisbury steaks:	
Additional revenue from processing further ($750 - $500)	*$250*
Additional cost for processing further	*200*
Increase (decrease) in profit from processing further	***$ 50***
Untanned hides to tanned hides:	
Additional revenue from processing further ($175 - $100)	*$ 75*
Additional cost for processing further	*80*
Increase (decrease) in profit from processing further	***$ (5)***

Question No. 1 (continued) (10 marks)

2. The resulting profit would be $350:

Sales ($300 + $750 + $100)		*$1,150*
Costs: Joint costs ($500 + $100)		
Further processing of hamburger	*$600*	
Profit	*200*	*800*
		$350

Question No. 2 (10 marks)

During 2016, Denby Manufacturing Company produced 17,000 specialty lightbulbs but only sold 13,000. Production costs for 2016 were as follows:

Direct Materials	$153,000
Direct Labour	110,500
Variable Manufacturing Overhead	204,000
Fixed Manufacturing Overhead	255,000

Sales were $780,000 for 2016 whereas variable selling and administrative expenses were $88,400, and fixed selling and administrative expenses were $170,000. There was no beginning inventory.

Required:

(a) Calculate the contribution margin per unit. (3 marks)

(b) Calculate the break-even point in total sales dollars. (3 marks)

(b) Using absorption costing, calculate the carrying value of the ending inventory on Denby's year-end Balance Sheet. (4 marks)

Answer:

(a) CM/unit = SP/unit – VCs/unit

$$= \frac{\$780{,}000}{13{,}000} - \left(\frac{\$153{,}000 + \$110{,}500 + \$204{,}000}{17{,}000}\right) - \frac{\$88{,}400}{13{,}000}$$

= $60.00 – $27.50 (i.e. $9.00 + $6.50 + $12.00) – $6.80
= $60.00 – $34.30 = ***$25.70***

(b) Break-even point (sales dollars) = $\frac{\text{Total Fixes Costs}}{\text{CM Ratio}} = \frac{\$255{,}000 + \$170{,}000}{\$25.70/\$60}$

$$= \frac{\$425{,}000}{42.833\%} = \textbf{\$992,227 (rounded)}$$

(c) Ending inventory = 17,000 units – 13,000 units = 4,000 units

$$\text{Absorption cost/unit} = \frac{\$153{,}000 + \$110{,}500 + \$204{,}000 + \$255{,}000}{17{,}000 \text{ units}}$$

$$= \frac{\$722{,}500}{17{,}000} = \$42.50 \text{ per unit}$$

Ending Inventory valuation = 4,000 units x $42.50/unit = ***$170,000***