

BMAL 530: BMAL 530 - Fall D, 2014 2

Homework 8

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1.

value:
6.00 points

Xinhong Company is considering replacing one of its manufacturing machines. The machine has a book value of \$37,000 and a remaining useful life of 4 years, at which time its salvage value will be zero. It has a current market value of \$47,000. Variable manufacturing costs are \$33,500 per year for this machine. Information on two alternative replacement machines follows.

	Alternative A	Alternative B
Cost	\$ 116,000	\$ 110,000
Variable manufacturing costs per year	22,500	10,200

Calculate the total change in net income if Alternative A is adopted. (Cash outflows should be indicated by a minus sign.)

ALTERNATIVE A: INCREASE OR (DECREASE) IN NET INCOME	
Cost to buy new machine	
Cash received to trade in old machine	
Reduction in variable manufacturing costs	
Total change in net income	

Calculate the total change in net income if Alternative B is adopted. (Cash outflows should be indicated by a minus sign.)

ALTERNATIVE B: INCREASE OR (DECREASE) IN NET INCOME	
Cost to buy new machine	
Cash received to trade in old machine	
Reduction in variable manufacturing costs	
Total change in net income	

Should Xinhong keep or replace its manufacturing machine? If the machine should be replaced, which alternative new machine should Xinhong purchase?

- ☐ Alternative B
☐ Keep the manufacturing machine
☐ Alternative A

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2.

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A company must decide between scrapping or reworking units that do not pass inspection. The company has 17,000 defective units that cost \$5.70 per unit to manufacture. The units can be sold as is for \$2.50 each, or they can be reworked for \$3.50 each and then sold for the full price of \$9.50 each. If the units are sold as is, the company will be able to build 17,000 units at a cost of \$5.70 each, and sell them at the full price of \$9.50 each.

(1) What is the incremental income from selling the units as scrap and reworking and selling the units?

	Sell as scrap	Rework
Incremental income (loss)		

The company should:

rev: 10_31_2014_OC_57946

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Farrow Co. expects to sell 300,000 units of its product in the next period with the following results.

Sales (300,000 units)	\$ 4,500,000
Costs and expenses	
Direct materials	600,000
Direct labor	1,200,000
Overhead	300,000
Selling expenses	450,000
Administrative expenses	771,000
Total costs and expenses	3,321,000
Net income	\$ 1,179,000

The company has an opportunity to sell 30,000 additional units at \$13 per unit. The additional sales would not affect its current expected sales. Direct materials and labor costs per unit would be the same for the additional units as they are for the regular units. However, the additional volume would create the following incremental costs: (1) total overhead would increase by 15% and (2) administrative expenses would increase by \$129,000.

Calculate the combined total net income if the company accepts the offer to sell additional units at the reduced price of \$13 per unit.

	Normal Volume	Additional Volume	Combined Total
Costs and expenses:			
Total costs and expenses			
Incremental income (loss) from new business			

Should the company accept or reject the offer?

- ☐ The company should reject the offer
☐ The company should accept the offer

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4. value:
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Gilberto Company currently manufactures one of its crucial parts at a cost of \$4.85 per unit. This cost is based on a normal production rate of 60,000 units per year. Variable costs are \$3.10 per unit, fixed costs related to making this part are \$60,000 per year, and allocated fixed costs are \$45,000 per year. Allocated fixed costs are unavoidable whether the company makes or buys the part. Gilberto is considering buying the part from a supplier for a quoted price of \$3.50 per unit guaranteed for a three-year period.

Calculate the total incremental cost of making 60,000 units.

Incremental costs to make			
	Relevant Amount per Unit	Relevant fixed costs	Total relevant costs
Total incremental cost to make			

Calculate the total incremental cost of buying 60,000 units.

Incremental costs to buy			
	Relevant Amount per Unit	Relevant fixed costs	Total relevant costs
Total incremental cost to buy			

Should the company continue to manufacture the part, or should it buy the part from the outside supplier?

- ☐ Make
☐ Buy

rev. 08_13_2014_QC_CXGACT-62

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5.

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Cobe Company has already manufactured 16,000 units of Product A at a cost of \$10 per unit. The 16,000 units can be sold at this stage for \$440,000. Alternatively, the units can be further processed at a \$270,000 total additional cost and be converted into 5,400 units of Product B and 12,000 units of Product C. Per unit selling price for Product B is \$105 and for Product C is \$58.

1. Prepare an analysis that shows whether the 16,000 units of Product A should be processed further or not.

	Sell as is	Process further
Sales		
Relevant costs:		
Total relevant costs		
Income (loss)		
Incremental net income (or loss) if processed further		
The company should		

rev: 11_26_2013_QC_41302, 12_26_2013_QC_42797, 03_11_2014_QC_46670

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