BRIEF EXERCISES

BE7-1 The steps in management's decision-making process are listed in random order below. Indicate the order in which the steps should be executed.

Identify the steps in management's decision-making process.
(LO 1), AP

_____ Make a decision
_____ Identify the problem and assign responsibility
_____ Review results of the decision
_____ Determine and evaluate possible courses of action

BE7-2 Bogart Company is considering two alternatives. Alternative A will have revenues of $160,000 and costs of $100,000. Alternative B will have revenues of $180,000 and costs of $125,000. Compare Alternative A to Alternative B showing incremental revenues, costs, and net income.

Determine incremental changes.
(LO 2), AP

BE7-3 At Jaymes Company, it costs $30 per unit ($20 variable and $10 fixed) to make a product at full capacity that normally sells for $45. A foreign wholesaler offers to buy 3,000 units at $25 each. Jaymes will incur special shipping costs of $2 per unit. Assuming that Jaymes has excess operating capacity, indicate the net income (loss) Jaymes would realize by accepting the special order.

Determine whether to accept a special order.
(LO 3), AP

BE7-4 Manson Industries incurs unit costs of $8 ($5 variable and $3 fixed) in making a subassembly part for its finished product. A supplier offers to make 10,000 of the assembly part at $6 per unit. If the offer is accepted, Manson will save all variable costs but no fixed costs. Prepare an analysis showing the total cost saving, if any, Manson will realize by buying the part.

Determine whether to make or buy a part.
(LO 4), AP

BE7-5 Chudrick Inc. makes unfinished bookcases that it sells for $62. Production costs are $36 variable and $10 fixed. Because it has unused capacity, Chudrick is considering finishing the bookcases and selling them for $70. Variable finishing costs are expected to be $7 per unit with no increase in fixed costs. Prepare an analysis on a per unit basis showing whether Chudrick should sell unfinished or finished bookcases.

Determine whether to sell or process further.
(LO 5), AP

BE7-6 Each day, Adama Corporation processes 1 ton of a secret raw material into two resulting products, AB1 and XY1. When it processes 1 ton of the raw material, the company incurs joint processing costs of $60,000. It allocates $25,000 of these costs to AB1 and $35,000 of these costs to XY1. The resulting AB1 can be sold for $100,000. Alternatively, it can be processed further to make AB2 at an additional processing cost of $45,000, and sold for $150,000. Each day's batch of XY1 can be sold for $95,000. Alternatively, it can be processed further to create XY2, at an additional processing cost of $50,000, and sold for $130,000. Discuss what products Adama Corporation should make.

Determine whether to sell or process further, joint products.
(LO 5), AP

BE7-7 Kobe Company has a factory machine with a book value of $90,000 and a remaining useful life of 5 years. It can be sold for $30,000. A new machine is available at a cost of $300,000. This machine will have a 5-year useful life with no salvage value. The new machine will lower annual variable manufacturing costs from $600,000 to $500,000. Prepare an analysis showing whether the old machine should be retained or replaced.

Determine whether to retain or replace equipment.
(LO 6), AP

BE7-8 Lisah, Inc., manufactures golf clubs in three models. For the year, the Big Bart line has a net loss of $10,000 from sales $200,000, variable costs $180,000, and fixed costs $30,000. If the Big Bart line is eliminated, $20,000 of fixed costs will remain. Prepare an analysis showing whether the Big Bart line should be eliminated.

Determine whether to eliminate an unprofitable segment.
(LO 7), AP

DO IT! REVIEW

DO IT! 7-1 Maize Company incurs a cost of $35 per unit, of which $20 is variable, to make a product that normally sells for $58. A foreign wholesaler offers to buy 6,000 units at $30 each. Maize will incur additional costs of $3 per unit to imprint a logo and to pay for shipping. Compute the increase or decrease in net income Maize will realize by accepting the special order, assuming Maize has sufficient excess operating capacity. Should Maize Company accept the special order?

Evaluate special order.
(LO 3), AN

Evaluate make-or-buy opportunity.
(LO 4), AN

DO IT! 7-2 Rubble Company must decide whether to make or buy some of its components. The costs of producing 60,000 switches for its generators are as follows.

Direct materials	$30,000	Variable overhead	$45,000
Direct labor	$42,000	Fixed overhead	$60,000

Instead of making the switches at an average cost of $2.95 ($177,000 ÷ 60,000), the company has an opportunity to buy the switches at $2.70 per unit. If the company purchases the switches, all the variable costs and one-fourth of the fixed costs will be eliminated.

(a) Prepare an incremental analysis showing whether the company should make or buy the switches. (b) Would your answer be different if the released productive capacity will generate additional income of $34,000?

Sell or process further.
(LO 5), AP

DO IT! 7-3 Mesa Verde manufactures unpainted furniture for the do-it-yourself (DIY) market. It currently sells a table for $75. Production costs are $40 variable and $10 fixed. Mesa Verde is considering staining and sealing the table to sell it for $100. Variable costs to finish each table are expected to be $17, and fixed costs are expected to be $3.

Prepare an analysis showing whether Mesa Verde should sell unpainted or finished tables.

Analyze whether to eliminate unprofitable segment.
(LO 7), AP

DO IT! 7-4 Gator Corporation manufactures several types of accessories. For the year, the gloves and mittens line had sales of $500,000, variable expenses of $370,000, and fixed expenses of $150,000. Therefore, the gloves and mittens line had a net loss of $20,000. If Gator eliminates the line, $38,000 of fixed costs will remain.

Prepare an analysis showing whether the company should eliminate the gloves and mittens line.

✓ The Navigator

EXERCISES

Analyze statements about decision-making and incremental analysis.
(LO 1, 2), C

E7-1 Ortega has prepared the following list of statements about decision-making and incremental analysis.

1. The first step in management's decision-making process is, "Determine and evaluate possible courses of action."
2. The final step in management's decision-making process is to actually make the decision.
3. Accounting's contribution to management's decision-making process occurs primarily in evaluating possible courses of action and in reviewing the results.
4. In making business decisions, management ordinarily considers only financial information because it is objectively determined.
5. Decisions involve a choice among alternative courses of action.
6. The process used to identify the financial data that change under alternative courses of action is called incremental analysis.
7. Costs that are the same under all alternative courses of action sometimes affect the decision.
8. When using incremental analysis, some costs will always change under alternative courses of action, but revenues will not.
9. Variable costs will change under alternative courses of action, but fixed costs will not.

Instructions

Identify each statement as true or false. If false, indicate how to correct the statement.

Use incremental analysis for special-order decision.
(LO 3), AN

E7-2 Gruden Company produces golf discs which it normally sells to retailers for $7 each. The cost of manufacturing 20,000 golf discs is:

Materials	$ 10,000
Labor	30,000
Variable overhead	20,000
Fixed overhead	40,000
Total	$100,000

Gruden also incurs 5% sales commission ($0.35) on each disc sold.

McGee Corporation offers Gruden $4.80 per disc for 5,000 discs. McGee would sell the discs under its own brand name in foreign markets not yet served by Gruden. If Gruden accepts the offer, its fixed overhead will increase from $40,000 to $46,000 due to the purchase of a new imprinting machine. No sales commission will result from the special order.

Instructions

(a) Prepare an incremental analysis for the special order.
(b) Should Gruden accept the special order? Why or why not?
(c) What assumptions underlie the decision made in part (b)?

E7-3 Leno Company manufactures toasters. For the first 8 months of 2014, the company reported the following operating results while operating at 75% of plant capacity:

Use incremental analysis for special order.

(LO 3), AN

Sales (350,000 units)	$4,375,000
Cost of goods sold	2,600,000
Gross profit	1,775,000
Operating expenses	840,000
Net income	$ 935,000

Cost of goods sold was 70% variable and 30% fixed; operating expenses were 75% variable and 25% fixed.

In September, Leno Company receives a special order for 15,000 toasters at $7.60 each from Centro Company of Ciudad Juarez. Acceptance of the order would result in an additional $3,000 of shipping costs but no increase in fixed operating expenses.

Instructions

(a) Prepare an incremental analysis for the special order.
(b) Should Leno Company accept the special order? Why or why not?

E7-4 Klean Fiber Company is the creator of Y-Go, a technology that weaves silver into its fabrics to kill bacteria and odor on clothing while managing heat. Y-Go has become very popular as an undergarment for sports activities. Operating at capacity, the company can produce 1,000,000 undergarments of Y-Go a year. The per unit and the total costs for an individual garment when the company operates at full capacity are as follows.

Use incremental analysis for special order.

(LO 3), AN

	Per Undergarment	Total
Direct materials	$2.00	$2,000,000
Direct labor	0.75	750,000
Variable manufacturing overhead	1.00	1,000,000
Fixed manufacturing overhead	1.50	1,500,000
Variable selling expenses	0.25	250,000
Totals	$5.50	$5,500,000

The U.S. Army has approached Klean Fiber and expressed an interest in purchasing 250,000 Y-Go undergarments for soldiers in extremely warm climates. The Army would pay the unit cost for direct materials, direct labor, and variable manufacturing overhead costs. In addition, the Army has agreed to pay an additional $1 per undergarment to cover all other costs and provide a profit. Presently, Klean Fiber is operating at 70% capacity and does not have any other potential buyers for Y-Go. If Klean Fiber accepts the Army's offer, it will not incur any variable selling expenses related to this order.

Instructions

Using incremental analysis, determine whether Klean Fiber should accept the Army's offer.

E7-5 Schopp Inc. has been manufacturing its own shades for its table lamps. The company is currently operating at 100% of capacity, and variable manufacturing overhead is charged to production at the rate of 70% of direct labor cost. The direct materials and direct labor cost per unit to make the lamp shades are $4 and $5, respectively. Normal production is 30,000 table lamps per year.

Use incremental analysis for make-or-buy decision.

(LO 4), AN

A supplier offers to make the lamp shades at a price of $12.75 per unit. If Schopp Inc. accepts the supplier's offer, all variable manufacturing costs will be eliminated, but the $45,000 of fixed manufacturing overhead currently being charged to the lamp shades will have to be absorbed by other products.

Instructions

(a) Should Innova purchase the component from the outside vendor if Innova's capacity remains idle?

(b) Should Innova purchase the component from the outside vendor if it can use its facilities to manufacture another product? What information will Innova need to make an accurate decision? Show your calculations.

(c) What are the qualitative factors that Innova will have to consider when making this decision?

(CGA adapted)

Use incremental analysis for further processing of materials decision.

(LO 5), AN

E7-9 Rachel Rey recently opened her own basketweaving studio. She sells finished baskets in addition to the raw materials needed by customers to weave baskets of their own. Rachel has put together a variety of raw material kits, each including materials at various stages of completion. Unfortunately, owing to space limitations, Rachel is unable to carry all varieties of kits originally assembled and must choose between two basic packages.

The basic introductory kit includes undyed, uncut reeds (with dye included) for weaving one basket. This basic package costs Rachel $14 and sells for $30. The second kit, called Stage 2, includes cut reeds that have already been dyed. With this kit the customer need only soak the reeds and weave the basket. Rachel is able to produce the second kit by using the basic materials included in the first kit and adding one hour of her own time, which she values at $18 per hour. Because she is more efficient at cutting and dying reeds than her average customer, Rachel is able to make two kits of the dyed reeds, in one hour, from one kit of undyed reeds. The Stage 2 kit sells for $35.

Instructions

Determine whether Rachel's basketweaving shop should carry the basic introductory kit with undyed and uncut reeds or the Stage 2 kit with reeds already dyed and cut. Prepare an incremental analysis to support your answer.

Determine whether to sell or process further, joint products.

(LO 5), AN

E7-10 Stahl Inc. produces three separate products from a common process costing $100,000. Each of the products can be sold at the split-off point or can be processed further and then sold for a higher price. Shown below are cost and selling price data for a recent period.

	Sales Value at Split-Off Point	Cost to Process Further	Sales Value after Further Processing
Product 10	$60,000	$100,000	$190,000
Product 12	15,000	30,000	35,000
Product 14	55,000	150,000	215,000

Instructions

(a) Determine total net income if all products are sold at the split-off point.

(b) Determine total net income if all products are sold after further processing.

(c) Using incremental analysis, determine which products should be sold at the split-off point and which should be processed further.

(d) Determine total net income using the results from (c) and explain why the net income is different from that determined in (b).

Determine whether to sell or process further, joint products.

(LO 5), AN

E7-11 Chen Minerals processes materials extracted from mines. The most common raw material that it processes results in three joint products: Larco, Marco, and Narco. Each of these products can be sold as is, or each can be processed further and sold for a higher price. The company incurs joint costs of $180,000 to process one batch of the raw material that produces the three joint products. The following cost and sales information is available for one batch of each product.

	Sales Value at Split-Off Point	Allocated Joint Costs	Cost to Process Further	Sales Value of Processed Product
Larco	$200,000	$40,000	$110,000	$300,000
Marco	300,000	60,000	85,000	400,000
Narco	405,000	80,000	250,000	800,000

Instructions

Determine whether each of the three joint products should be sold as is, or processed further.