

Ch. 12 Practice Quiz

1. Mankus Inc. is considering using stocks of an old raw material in a special project. The special project would require all 120 kilograms of the raw material that are in stock and that originally cost the company \$816 in total. If the company were to buy new supplies of this raw material on the open market, it would cost \$7.25 per kilogram. However, the company has no other use for this raw material and would sell it at the discounted price of \$6.75 per kilogram (including shipping cost) if it were not used in the special project. The sale of the raw material would involve delivery to the purchaser at a total cost of \$50.00 for all 120 kilograms. What is the relevant cost of the 120 kilograms of the raw material when deciding whether to proceed with the special project?

- A) \$810
B) \$870
C) \$760
D) \$816

Answer: C Level: Hard LO: 1 Source: CIMA, adapted

$$\begin{array}{rcl}
 \$6.75 & \times & 120\text{Kg} = \$810 \quad (\text{includes shipping cost}) \\
 \text{FMV} & & \\
 & & \text{shipping cost.} \quad - 50 \quad (\text{irrelevant; non-differential}) \\
 & & \hline
 \text{Relevant cost of raw material} & & \underline{\underline{\$760}}
 \end{array}$$

2. Teich Inc. is considering whether to continue to make a component or to buy it from an outside supplier. The company uses 15,000 of the components each year. The unit product cost of the component according to the company's absorption cost accounting system is given as follows:

Direct materials	\$ 7.90
Direct labor	2.10
Variable manufacturing overhead	1.10
Fixed manufacturing overhead	4.00
Unit product cost	<u>\$15.10</u>

10% avoidable \Rightarrow \$0.40 relevant.
90% unavoidable \Rightarrow \$3.60 irrelevant

Assume that direct labor is a variable cost. Of the fixed manufacturing overhead, 10% is avoidable if the component were bought from the outside supplier; the remainder is not avoidable. In addition, making the component uses 3 minutes on the machine that is the company's current constraint. If the component were bought, this machine time would be freed up for use on another product that requires 6 minutes on the constraining machine and that has a contribution margin of \$8.10 per unit.

When deciding whether to make or buy the component, what cost of making the component should be compared to the price of buying the component?

- A) \$15.55
- B) \$11.50
- C) \$19.15
- D) \$15.10

Answer: A Level: Hard LO: 3 Source: CIMA, adapted

	<u>If Make</u>
DM	7.90
DL	2.10
VMOH	1.10
FMOH	0.40

Opportunity Cost

lost opportunity to save \$0.40/unit of FMOH

CM lost. 4.05

lost opportunity to make additional CM by buying from Teich and using freed up machine time on another product.

IF buy \Rightarrow 8.10/6min or 4.05/3min.

\$15.55

* IF "Buy" offer comes in below \$15.55, it is advantageous to buy.

Dockwiller Inc. manufactures industrial components. One of its products, which is used in the construction of industrial air conditioners, is known as D53. Data concerning this product are given below:

	<i>Per Unit Data</i>
Selling price	\$150
Direct materials	\$26
Direct labor	\$3
Variable manufacturing overhead	\$1
Fixed manufacturing overhead	\$17
Variable selling expense	\$2
Fixed selling and administrative expense	\$18

\$30

The above per unit data are based on annual production of 8,000 units of the component. Direct labor can be considered to be a variable cost.

3. The company has received a special, one-time-only order for 500 units of component D53. There would be no variable selling expense on this special order and the total fixed manufacturing overhead and fixed selling and administrative expenses of the company would not be affected by the order.

Assuming that Dockwiller has excess capacity and can fill the order without cutting back on the production of any product, what is the minimum price per unit on the special order below which the company should not go?

- A) \$67
- B) \$30
- C) \$150
- D) \$47

Answer: B Level: Medium LO: 4 Source: CMA, adapted

The Wester Company produces three products with the following costs and selling prices:

	Product		
	A	B	C
Selling price per unit	\$21	\$12	\$32
Variable cost per unit	\$11	\$7	\$18
Fixed cost per unit	\$5	\$3	\$9
Direct labor hours per unit	0.4	0.1	0.7
Machine hours per unit	0.2	0.5	0.2

The company has insufficient capacity to fulfill all of the demand for these three products.

4. If direct labor hours are the constraint, then the three products should be produced in the order:

- A) A, B, C
- B) B, A, C
- C) C, A, B
- D) A, C, B

Answer: B Level: Hard LO: 5

	Product		
	A	B	C
Price	21	12	32
VC	11	7	18
CM	10	5	14
per DLH	$\div 0.4$	$\div 0.1$	$\div 0.7$
CM/per constraint	\$25	\$50	\$20
	2 nd	1 st	3 rd

Order: B, A, C

Dockham Company makes two products from a common input. Joint processing costs up to the split-off point total \$33,600 a year. The company allocates these costs to the joint products on the basis of their total sales values at the split-off point. Each product may be sold at the split-off point or processed further. Data concerning these products appear below:

	Product X	Product Y	Total
Allocated joint processing costs	\$14,000	\$19,600	\$33,600
Sales value at split-off point	\$20,000	\$28,000	\$48,000
Costs of further processing	\$26,300	\$24,500	\$50,800
Sales value after further processing	\$50,200	\$48,600	\$98,800

5. What is the net monetary advantage (disadvantage) of processing Product X beyond the split-off point?

- A) \$23,900
- B) \$29,900
- C) \$3,900
- D) \$9,900

Answer: C Level: Medium LO: 6

$$\begin{array}{r}
 \text{Product X} \\
 \hline
 \text{Sales after } 50,200 \\
 \text{Sales before } 20,000 \\
 \hline
 \text{Sales increase } 30,200 \\
 \text{Cost after } 26,300 \\
 \hline
 \text{Add. profit } 3,900
 \end{array}$$

\$33,600