

10/10 Excellent

1. Auto Repair charges \$42 per hour of labor. It has a material loading percentage of 40%. On a recent job replacing the engine of a truck, the company worked 10.5 hours and used parts with a cost of \$700. What should be Auto repair's total bill.

Labor Charge ($\$42 \times 10.5$)

441

Material cost

700

 $(700 \times 40\%)$

280

980

Total Billed $\Rightarrow$

1421

2. The heating division of company ABC produces a heating element that it sells to its customers for \$45 per unit. Its variable cost per unit is \$20, and fixed cost per unit is \$10. Top management would like the Heating Division to transfer 15,000 heating units to another division within the company at a price of \$29.
- a) The Heating Division is operating at full capacity. What is the minimum transfer price that the Heating Division would accept?

10-11

 $(45 - 20) + 20$

\$45

 $25 + 20 =$

- b) The Heating Division has sufficient excess capacity to provide the 15,000 heating units to the other division. What is the minimum transfer price that the Heating Division would accept?

VC + OVC

 $20 + 0$ $= \$20$

(10) +2 Excellent

Choose one of two following cases for analysis.

1. It costs Value Corp. \$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. If Value Corp. takes the order, the company will incur special shipping costs of \$2 per unit. Assuming that Value Corp. has excess operating capacity.

Question: Should Value Corp. accept the special order (Use incremental analysis to determine the net income if Value Corp. rejects the special order, the net income if Value Corp. accepts the special order)?

135,000 - 90,000 45,000		
	reject	accept
purchase price	45,000	25 x 3,000 = 75,000
V.C	0	20 x 3,000 = 60,000
f.c	0	0 b.c they are not at full capacity
shipping cost	0	2 x 3,000 = 6,000
NI - total	0	75,000 - 6,000 - 6,000 = \$9,000

full capacity = $\frac{16,000}{70\%} = \sim 14,286$

They should accept the offer because it will yield them an increase in net income of \$9,000

2. Valsh 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, Valsh will save all variable costs but no fixed costs.

Question: Should Valsh make or buy the part? Show your analysis (ignore the opportunity cost).

	Make	Buy
	(8 x 10,000) 80,000	(6 x 10,000) 60,000
variable cost	5 x 10,000 50,000	0
fixed cost	3 x 10,000 30,000	3 x 10,000 30,000
	80,000	90,000

Valsh should make the part because it would be \$10,000 cheaper

↓
90,000 - 80,000 = 10,000

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The Cutting Department of Cassel Company has the following production and cost data for July.

Production	Costs
1. Transferred out 12,000 units	Beginning work in process \$-0-
2. Started 3,000 units that are 60% complete as to conversion costs and 100% complete as to materials at July 31.	Materials 45,000
	Labor 16,200
	Manufacturing Overhead 18,300

Materials are entered at the beginning of the process. Conversion costs are incurred uniformly during the process.

Questions:

- 1) What are the equivalent units (EU) of production for material?

$$12,000 + (3,000) \times (100\%) = 15,000$$

- 2) What are the EU for conversion cost?

$$12,000 + (3,000) \times (60\%) = 13,800$$

- 3) What will be the unit costs?

Unit material cost:

$$\frac{45,000}{15,000} = \$3$$

unit conversion cost:

$$\frac{16,200 + 18,300}{13,800} = \frac{34,500}{13,800} = \$2.50$$

$$\text{total unit cost} = \$3.00 + \$2.50 = \$5.50$$

- 4) What is the cost of the units transferred out?

$$12,000 \times \$5.50 = \$66,000$$

- 5) What is the cost of the units that are still in work in process?

$$\text{materials} - 3,000 \times \$3.00 = \$9,000$$

$$\text{conversion} - (3,000) \times (60\%) \times \$2.50 = \$4,500$$

total cost of WIP

$$\$13,500$$