CH-3 Remaining 10/10

P3-1A JB Journal Transactions

1.	Raw materials	300,000	
	Accounts payable		300,000
2.	Work in Process – Mixing	210,000	
	Work in Process – Packaging	45,000	
	Raw Materials Inventory		255,000
3.	Factory Labor	258,900	
	Wages Payable		258,900
4.	Work in process – Mixing	182,500	
	Work in process – Packaging	76,400	
	Factory Labor		258,900
5.	Manufacturing Overhead	810,000	
	Accounts Payable		810,000
6.	Work in Process – Mixing (28,000 x $24)	672,000	
	Work in Process – Packaging (6000 x $24)	144,000	
	Manufacturing Overhead		816,000
7.	Work in Process – Packaging	979,000	
	Work in Process – Mixing		979,000
8.	Finished Goods Inventory	1,315,000	
	Work in Process – Packaging		1,315,000

9. Accounts Receivable	2,500,000	
Sales Revenue		2,500,000
Cost of Goods Sold	1,604,000	
Finished Goods inventory		1,604,000

CHAPTER-5
PADMAVATHI MYLAPORE

10/10

E 5-1 Define the terms:

(a) Variable Costs : Costs the vary in total directly and proportionately with changes in the activity level.

Fixed Cost : Costs that remain the same in total regardless of changes in the activity level.

Mixed Costs : Costs that ~~remain~~ contain both a variable and a fixed cost-element and change in total but not proportionately with changes in the activity level.

(b)

Direct materials	—	Variable costs ✓
Direct labor	—	Variable costs ✓
Utilities	—	Mixed costs ✓
Rent	—	Fixed costs ✓
Maintenance	—	Mixed costs ✓
Supervisory Salaries	—	Fixed costs ✓

+2

E 5-3 (a) Step-1 Variable cost of the line

$$m = \frac{(\$4900 - \$2500)}{700 - 300} = \frac{\$2400}{400 \text{ machine Hrs}} = \$6x/\text{hr}$$

$y = \$6x/\text{hr}$ ✓

Step-2 Total fixed cost of the line

(H) $y = \$6x + b$

$\$4900 = \$6(700) + b$

$b = \$4200 - \$4900 = \$700$ ✓

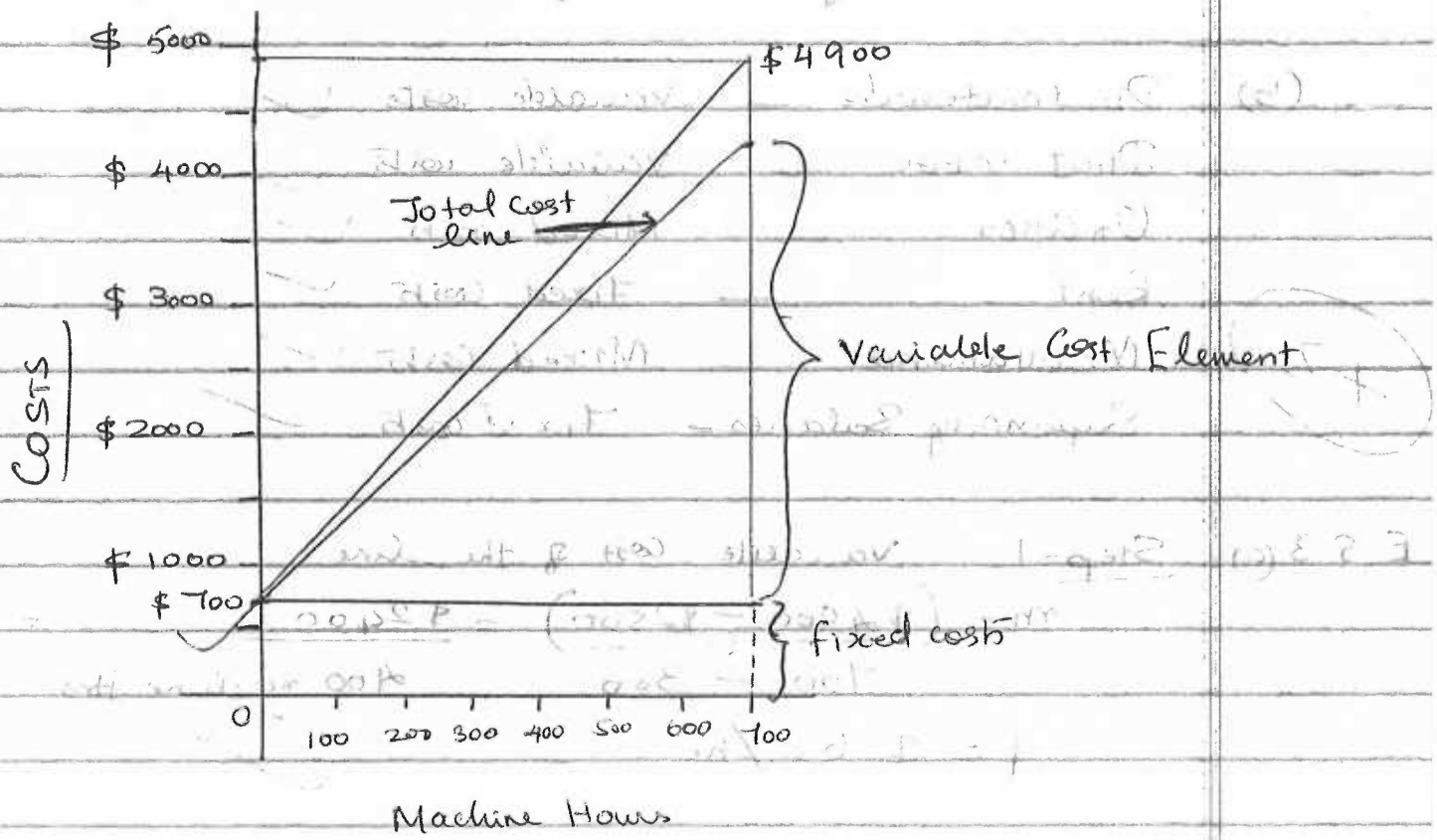
(a) $\$2500 = \$6(300) + b$

$b = \$1800 - \$2500 = \$700$

$\boxed{Y = \$6x + 700}$

(b) 100 hr increments and $1000 cost increments

So, $\$1000 = \$6(100) + \$700$



E5-5

Dousmann Industries

(a)

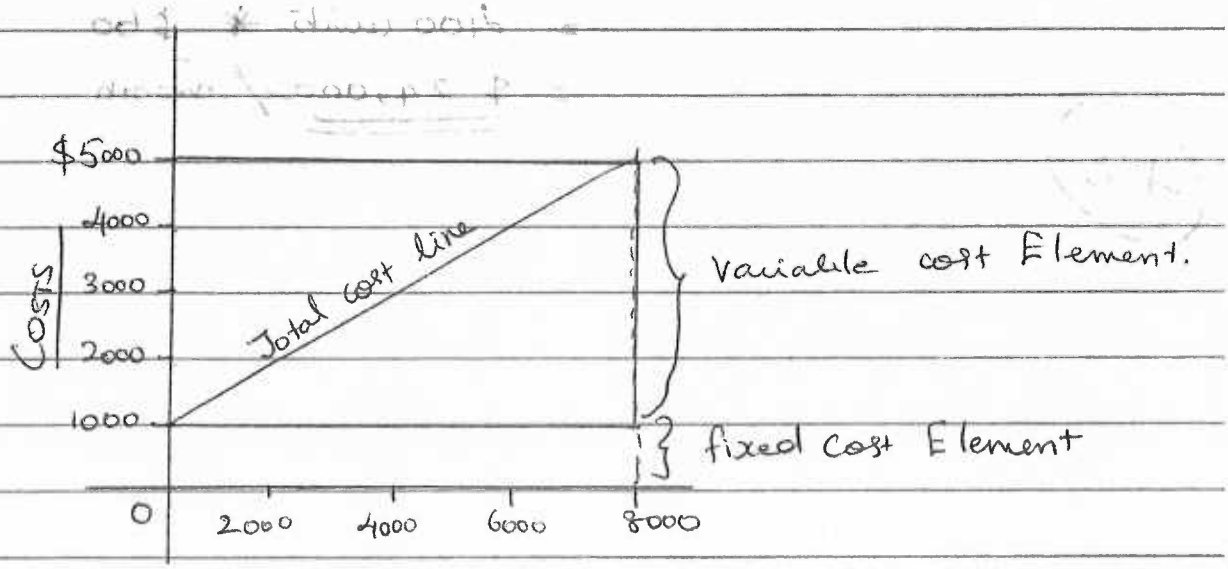
	Activity level	
	High	low
Total costs	$5,000	$ 2,750
Less: Variable costs		
8000 x $0.5	4,000	
3500 x $0.5		1,750
Total fixed costs	$ 1,000	$ 1,000

Change in Total costs / Change in activity level = Variable cost/unit

$5000 − $2750 / 8000 − 3500 = $0.5 per unit

2,250 / 4500

(b)



E 5-9 Green Acres

Variable costs	per room	Fixed Costs	per month
Maid Service	$ 11	Salaries	$ 6200
Other Costs	. 28	Utilities	1100
	$ 39	Depreciation	1,000
		Maintenance	100
			$ 8,400

Selling price = $60 / night

Sales revenue = 500 rooms x 60 $ = $3000

- Contribution margin / unit:

Selling price : $60

Variable cost/per unit : 39

$21

- Breakeven point in Units: fixed costs ÷ Contribution margin / unit

= $ 8400 ÷ $21

= 400 units / month

- Breakeven point in ratio = Breakeven point in units * Selling price.

= 400 units * $60

= $ 24,000 / month

(+2)

E 5-10

Style Salon Services

of clients = 560

each paid = $120

Sales revenue = 560 x $120 = $67,200

Total variable cost = $67,200 x $\frac{60}{100}$ (60%) = $40,320

(a) Total contribution margin in dollars = T. Sales Rev. − TVC

= $67,200 − $40,320

= $ 26880 ✓

Contribution margin in Unit = Unit sales price − Unit · V. C

(Note: Unit V.C = 60% of selling price)

= $120 − $72 = $48 ✓

(b) Breakeven point in units = T. Sales − TVC − TFC = NI

120Q − 72Q − $21,024 = 0

Q = $\frac{\$21,024}{48}$

= 438 units

(+2)

Breakeven point in dollars = B.P in Units x Unit sales price

= 438 units x $120

= $ 52,560 ✓

(a) Contribution margin ratio = Contribution margin/unit ÷ unit sale price

= $48 ÷ $120

= 0.4 = 40% ✓

P5-1 A — Bonita Barber Shop

(a) Total monthly fixed costs & Variable Costs:

Variable costs (per haircut)		Fixed cost (per month)	
Barber's commission	$4.50	Barber's Salaries	$4000
Barber Supplies	.30	Manager's extra Salary	500
Utilities	.20	Advertising	200
Total variable cost/haircut	$5.00	Rent	1,100
		Utilities	145
		Magazines	25
		Total fixed	$6000

(b) Breakeven point in Units: Total Sales − TVC − TFC = NI

$10Q - 5Q - \$6000 = 0$

$Q = \$6000 / 5$

$= 1200$ haircuts

Breakeven point in dollars: B.P in units × selling price

1200 units × $10 = $12,000

(d) Net income = 1700 units × Selling price

= 1700 units × $10

= $17,000

∴ $17,000 − [($5.00 × 1700) + $6,000]

NI = $2500

+2

P5-2A

CVP Income Statement (Estimated)

Jorge Company

Net Sales		$1,800,000
Variable expenses		
Cost of goods sold	$1,170,000*	
Selling expenses	70,000	
Administrative expenses	20,000	
Total Variable exp.		1,260,000
Contribution margin		540,000
Fixed expenses		
Cost of goods sold	$280,000	
Selling expenses	65,000	
Administrative expenses	60,000	
Total fixed expenses		405,000
Net income		$135,000

(*Notes: Direct materials $430,000 + direct labor $360,000 + Variable manufacturing overhead $380,000)

(b) Variable costs = V. Expenses ÷ Net sales

= $1,260,000 ÷ $1,800,000 = 70% of sales

or $.35 / bottle

Total fixed costs = $405,000

Selling price / bottle = $.50 / bottle

less V.C / " = .35 "

C.M / bottle $.15 / bottle

Breakeven in Units: FC ÷ CM / unit

$405,000 ÷ $.15 / bottle = 2,700,000 bottles

Breakeven in dollars : BP in Units x selling price

= 2,700,000 x $.50 = $1,350,000 ✓

(c) Contribution margin ratio : Contri. Margin per unit ÷ Unit selling price

$.15 per bottle ÷ $.50 per unit. = 0.3 x 100

CMR = 30 % ✓

Margin of Safety ratio : margin safety in dollars ÷ Actual (Expe) Sales

= ($1,800,000 - 1,350,000) ÷ 1,800,000

= 25 % ✓

(d) Required Sales − Variable costs − Fixed costs = Net income

$.50Q − $.35Q − $405,000 = 180,000

$$Q = \frac{\$180,000 + \$405,000}{\$.15}$$

= 3,900,000 units

now, 3,900,000 units x $.50 = $1,950,000 required sales ✓

+2