**Assignment 03:**

1. (C) Variable cost per unit
2. (A) The origin and slopes upward
3. (B) Fixed cost per unit decreases when volume increases.
4. (B) Data points falling in a linear pattern suggest a weak relationship between cost and volume.
5. (B) It treats fixed MOH costs as period costs, rather than inventoriable product costs.
6. (C) The intersection of the total revenue line and the total expense line
7. (A) Its contribution margin ratio will decrease
8. (C) Decrease the sales needed to breakeven
9. (B) Has relatively more variable costs than fixed costs
10. (C) Contribution margin / Operating income

11)Assume the local fitness club charges a membership fee of $30 per month of unlimited use of the exercise equipment plus an additional fee of $5 for every instructor-led exercise class you attend.

1. Express the monthly cost of belonging to the fitness club as a cost equation.

Monthly cost is expressed as y = $5x + $30.

y = monthly cost of belonging to club

x = number of instructors led classes attended.

1. What is your expected cost for a month in which you attend five instructor-led classes?

Number of classes attended = 5

Expected cost = ($5\*5) + $30 = $55

1. If your attendance doubles to 10 classes per month, will your total cost for the month double? Explain.

Number of classes attended = 10

Expected cost = ($5\*10) + $30 = $80

Since only the variable portion of bill doubles and fixed portion stays constant, the total cost does not double if number of classes attended doubles.

12)Taylor runs her own hot dog stand. The monthly cost of the cart rental and business permit is $300. Rachel spends $0.50 on each hot dog sold, including bun and condiments. She sells each hot dog for $2.00,

1. What is the contribution margin per unit?

Sales price / unit = $2.00

Variable Cost / unit = $0.50

Contribution Margin/ unit = $2.00 - $0.50 = $1.50

1. What the contribution margin ratio?

Contribution margin ratio = contribution margin per unit / sales price per unit = $1.50/$2.00 = 75%

1. Predict operating income for a month in which Taylor sells 1,000 hot dogs.

Contribution margin ratio= (1000 hot dogs \* 1.50/hotdog) = $1500

Fixed expenses = 300

Operating income = 1500 – 300 = $1200

1. How many hot dogs does Taylor need to sell each month to breakeven?

Sales in units = (fixed expense + operating income) / (contribution margin per unit)

300+0/1.50 = 200 hotdogs

1. How much sales revenues doe Taylor need to generate each month to breakeven?

Sales to breakeven = (fixed expense + operating income) / (contribution margin per unit) = 300 + 0 / 75% = $400 of sales

1. How many hot dogs does Taylor need to sell each month to earn a target profit of $900 a month?

Sales = (fixed expense + operating income) / (contribution margin per unit)

($300+$900) / $1.50 = 800 hotdogs per month

1. How much sales revenue does Taylor need to generate each month to earn a target profit of $900 per month?

Sales = (fixed expense + operating income) / (contribution margin ratio)

$300 + $900 / 75% = $1,600 of sales revenue

13)Store A buys hiking socks for $6 a pair and sells them for $10. Management budgets monthly fixed expenses of $10,000 for sales volumes between 0 and 12,000 pairs.

1. Use the income statement approach and the short unit contribution margin approach to compute monthly breakeven sales in units.

Monthly breakeven = (10,000+0) / 4 = $2500 units

1. Use the short contribution margin ratio approach to compute the breakeven point in sales revenue (sales dollars).

Contribution margin = 2500 \* 10 = $25,000

1. Compute the monthly sales level (in units) required to earn a target operating income of $14,000. Use either the income statement approach or the shortcut contribution margin approach.

X (10-6) – 10,000 = 14000

4X = 24,000.

X= 6000 units