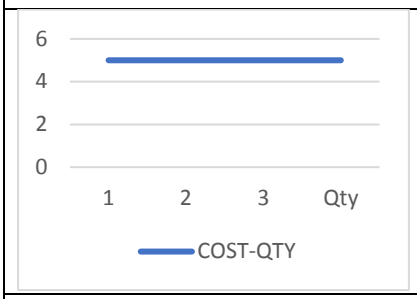
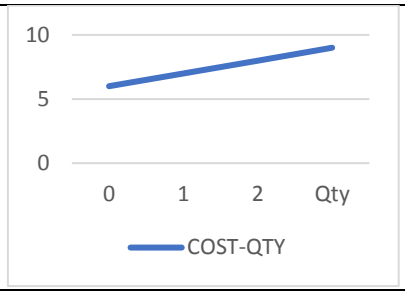
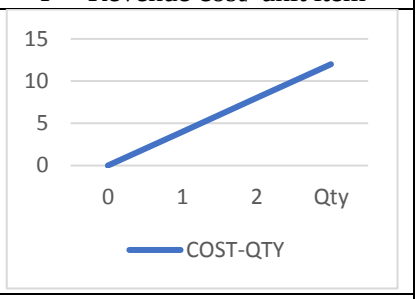
2. BREAK EVEN ANALYSIS

TYPES OF COST		
TOTAL COST		**TOTAL REVENUE COST**
TOTAL FIXED COST	**TOTAL VARIABLE COST**	
• E.g. Initial investments (Land, Machine)	• E.g. Cost Required for unit production (Manpower, Electricity)	• E.g. Revenue generated from the production.
	$T.V.C. = QV_c$ V_c= Variable cost/ unit item	$T.R.C. = QP$ P = Revenue cost/ unit item
		
TOTAL COST = F.C. + V.C. = $F.C. + QV_c$		**$T.R.C. = QP$**

BREAK EVEN POINT: It's the qty at which total revenue cost is equal to total cost. (No profit, No loss)

$\boldsymbol{At\ BEP, Q = \frac{F.C.}{P - V_c}, \theta = Angle\ of\ inclidence.}$	1. If θ is more, Q_{BEP} is less. 2. If θ is less, Q_{BEP} is more.
$\boldsymbol{Break\ Even\ Sales\ (BES) = PQ_{BEP} = \frac{F.C.}{1 - (V_c/P)} = \frac{F.C.}{C.M.R.}}$	Q_x = Quantity at which profit is obtained, $P - V_c$ = Contribution
$\boldsymbol{Profit = T.R.C. - F.C.}$ Q_x equation is obtained from Profit equation at Q_x selling.	$\boldsymbol{Q_x = \frac{F.C. + Profit}{P - V_c}}$

CONTRIBUTION OF MARGIN OR PROFIT TO VOLUME RATIO:

It's used to identify the best profitable product among multiple product for same company.

$Contribution\ of\ margin = T.R.C. - T.V.C.$
$Contribution\ of\ margin\ ratio\ (C.M.R.) = \frac{T.R.C. - T.V.C.}{T.R.C.} = \frac{PQ_x - Q_xV_c}{PQ_x} = 1 - \frac{V_c}{P}$

CONTRIBUTION OF SALES IN %:

$$M.O.S.\ in\ \% = \left[\frac{(T.R.C.)_x - (T.R.C.)_{BEP}}{(T.R.C.)_x}\right] * 100 = \left[\frac{PQ_x - PQ_{BEP}}{PQ_x}\right] * 100$$