Chapter 3 - Cost - Volume - Profit analysis

1. Cost behavior
   - Costs represents the resources sacrificed to achieve benefits;
   - Fixed costs = remain constant with the volume of output
   - Variable costs vary according to the volume of activity

2. Different types of costs
   - **Fixed costs**: the amount of fixed cost (distance OF) remains the same irrespective of the volume of activity.
     - rent, insurance, cleaning cost, staff salaries
     - redundancies may incur with fixed costs savings
     - fixed costs are likely to be affected with **inflation**!
     - always **time based**: the level of fixed cost does not stay the same irrespective of the time period involved.
     - fixed costs varies with time but not the level of output!
     - constitutes the bulk of total costs
   - **Variable costs**: costs vary with the volume of activity (ie. cost of raw material)
     - costs increases in a straight line as the activity increases.
     - it is assumed that variable costs are varying **constantly/consistently** with the level of output
   - **Semi-fixed/Semi-variable costs**: have elements of both.
     - analysis with the high low method: in a business where TC is not divided into VC and FC we can use this method to calculate the VC and FC separately; based on the assumption that FC remains the same and increase in cost relative to VC.
     - In this method, an assumption is made that the difference between the 2 quarterly figures is caused entirely by the VC
   - **Line of best fit** uses the **least squares regression**: the slope of the line gives the VC

3. Break Even Point
   - BE: where there is neither profit nor loss.
   - BEP = \( FC / (Sales \ revenue \ per \ unit - VC \ per \ unit) \)
   - BEP point * Sales revenues = BEP in revenues

4. Contribution
   - the denominator of the BEP formula is the contribution per unit
   - Contribution to meeting the fixed costs, if there is any excess then it is in the profit.
   - **Contribution margin ratio**: the contribution of an activity expressed as a percentage of sales
     - \( CMR = \frac{Contribution}{Sales \ revenue} \)
     - \( CMR\% = \frac{(Sales \ revenue \ per \ unit - VC \ per \ unit)}{Sales \ revenue} \times 100 \)

5. Margin of Safety