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Cost of Production

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1. COST OF PRODUCTION

Explicit Cost

The cost that is incurred in order to obtain inputs from others for the production process. It is also named as Accounting Cost.

Implicit Cost

It is the Cost that the value forgone in order to achieve the best alternative .It is also named as Opportunity Cost.

NOTE:

- Accounting Cost = Explicit Cost
- Economic Cost = Explicit Cost + Implicit Cost
- Accounting Profit = Total Revenue – Accounting Cost
- Economic Profit= Total Revenue – Economic Cost

2. Classification of Cost

Total Variable Cost (TVC)

This is varied according to the number of units produced in the given period of time.

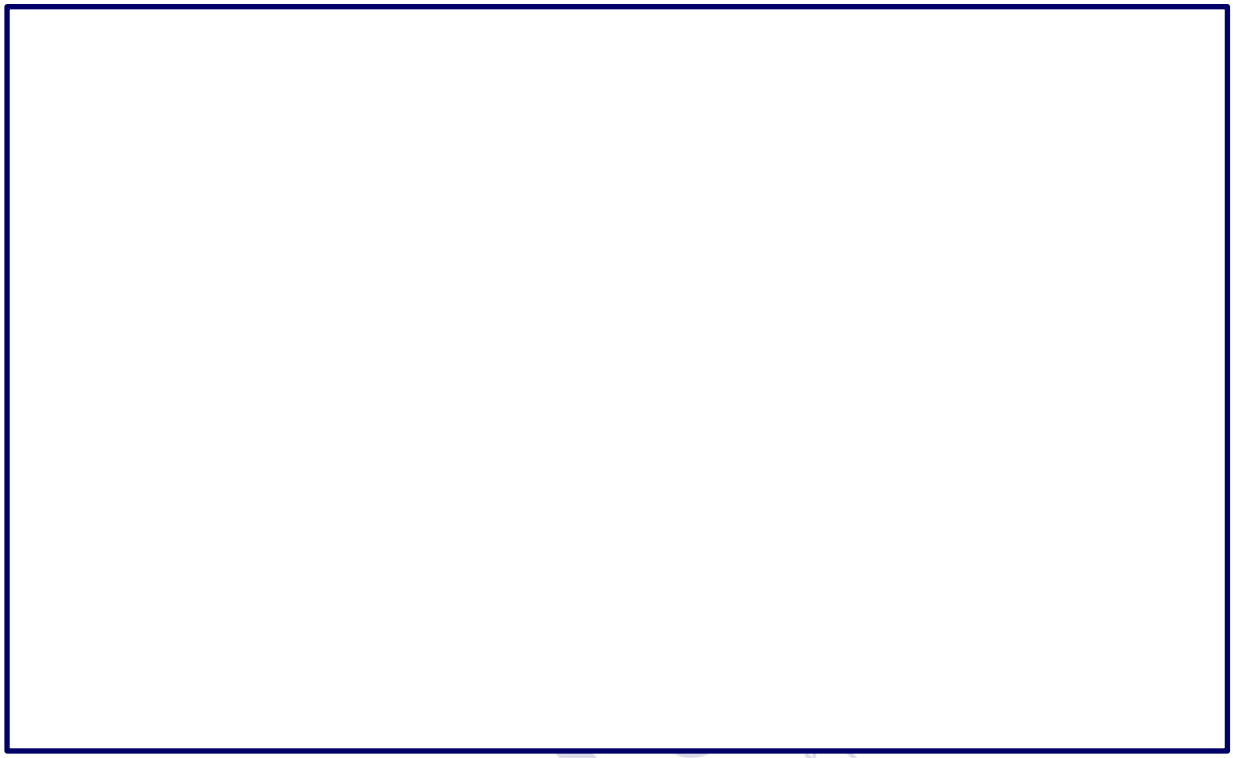
Total Fixed Cost (TFC)

It remains constant regardless of number of units produced in the given period of time.

Total Cost (TC)

This is simply the addition of Total Variable Cost (TVC) & Total Fixed Cost (TFC).

3. Diagram of TVC, TFC & TC curves



NOTE:

- There is no Total Variable Cost during the time of zero level production. Therefore, TC=TFC.
- TC and TVC Curves Move as Parallel curves because the gap is TFC.
- In the short run production Variable costs and fixed costs exist, but in the long run production there will be only Variable Costs.
- The Classification of short run and long run does not depend on the specific time period, it varies according to type of the business, size of the business, the nature of the industry and technology used.

Average Variable Cost (AVC)

It is the variable cost to produce one unit.

$$AVC = \frac{TVC}{Q}$$

Average Fixed Cost (AFC)

It is the fixed cost per unit.

$$AFC = \frac{TFC}{Q}$$

Average cost (AC)

It is the average for one unit.

$$\mathrm{AC} = \frac{\mathrm{TC}}{\mathrm{Q}}$$

OR

$$\mathrm{AC} = \mathrm{AVC} + \mathrm{AFC}$$

Marginal Cost (MC)

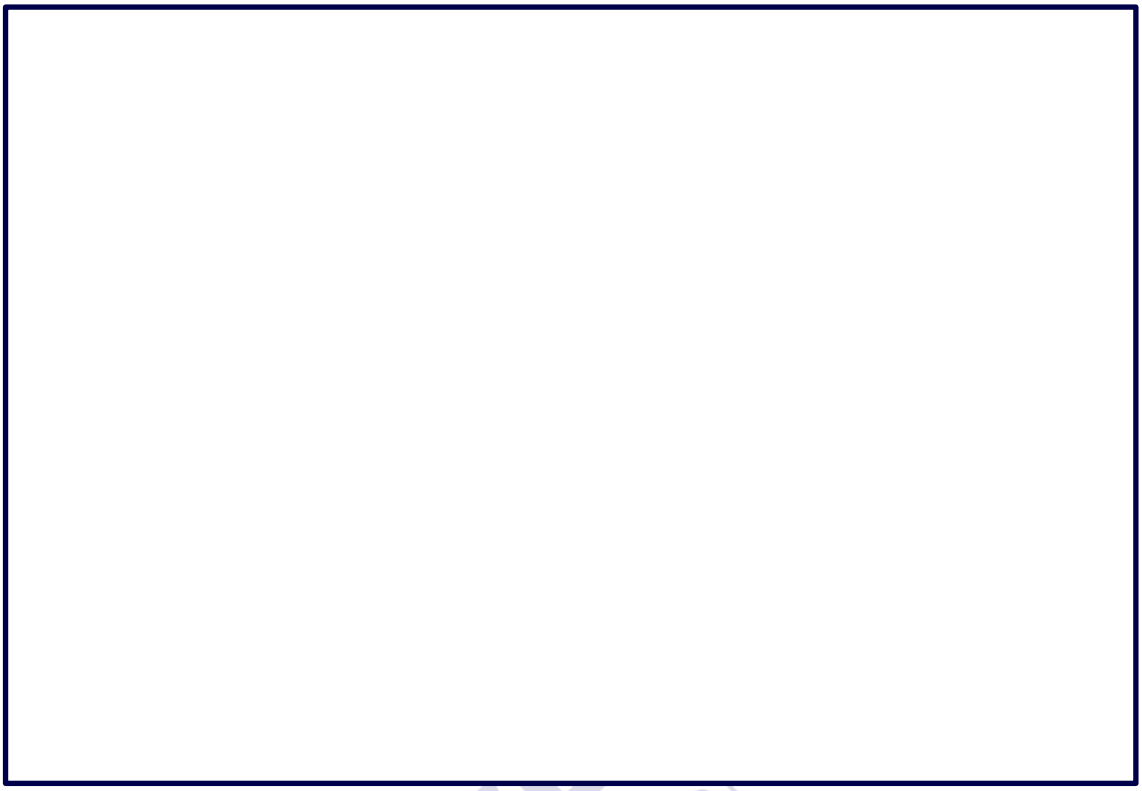
It is the additional cost to produce one addition unit to the total production

$$\mathrm{MC} = \frac{\Delta \mathrm{TC}}{\Delta \mathrm{Q}}$$

OR

$$\mathrm{MC} = \frac{\Delta \mathrm{TVC}}{\Delta \mathrm{Q}}$$

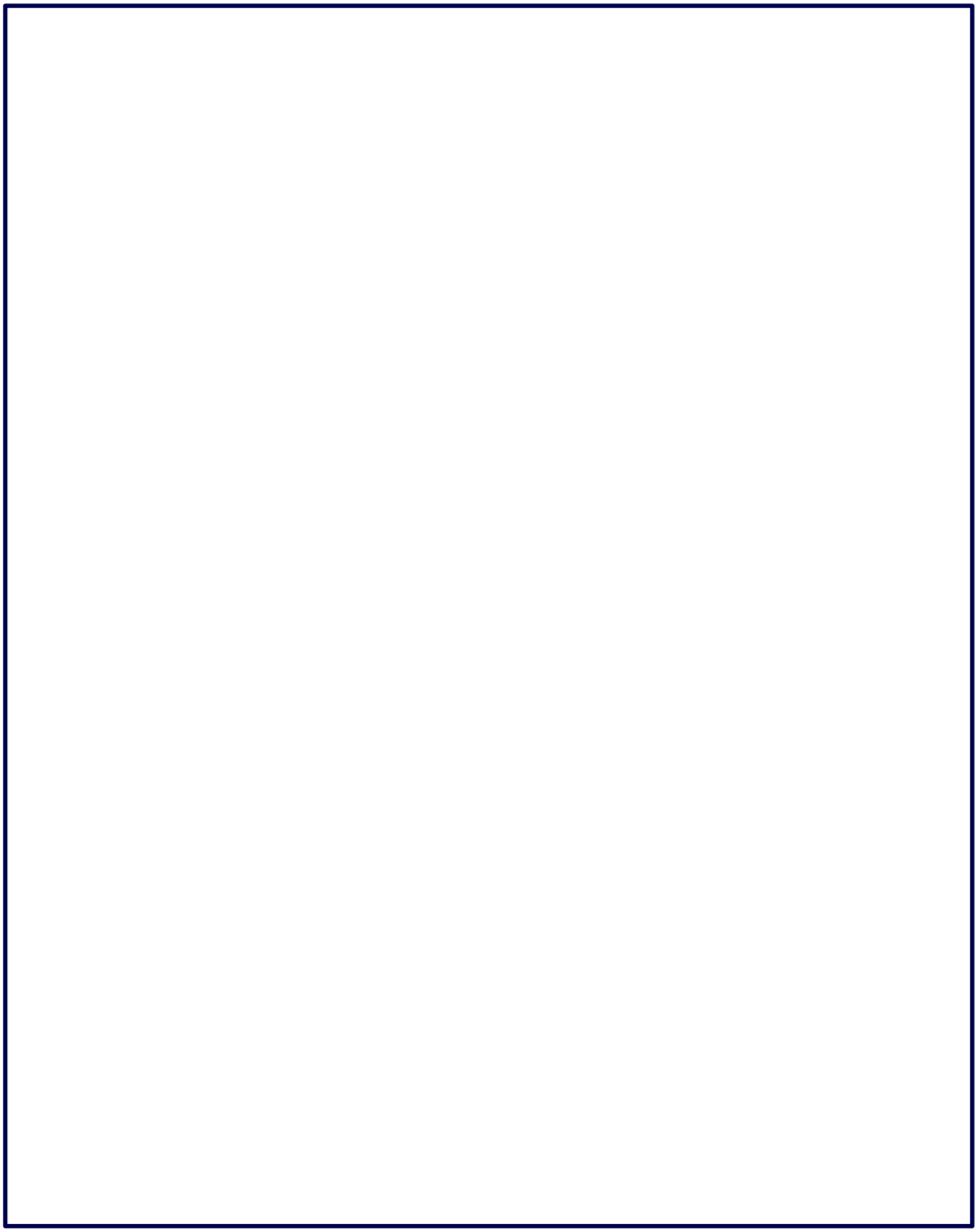
4. Diagram of AVC, AFC & MC curves



EXAMPLE:

Q	TC	TFC	TVC	AC	AVC	AFC	MC
0	100						
1	180						
2	240						
3	280						
4	300						
5	310						
6	350						
7	450						
8	600						
9	800						
10	1100						

- ✓ You are required to ,
  1. Fill all the relevant costs
  2. Draw all the total costs
  3. Draw all the average costs



5. Terms related to production

Total Production (TP)

The total number of units that can be produced for a level given of inputs.

Average Production (AP)

Production per unit of the variable input.

$$AP = \frac{TP}{L}$$

Marginal Production (MP)

The changes in the total production by using one additional variable factor to the total amount.

$$MP = \frac{\Delta TP}{\Delta L}$$

6. Theory of production

❖ Short run Theory of production - The law of diminishing marginal returns

- ✓ In the short run when a firm adds more and more of variable factors to the given set of fixed factors, the total production, average production and the marginal production will decline after the certain point.
- ✓ When TP maximized MP becomes Zero (0).
- ✓ When MP declines it goes through the maximum point of AP.
- ✓ At this time when MP declines it decreases with a Positive amount, Zero and the Negative amount.

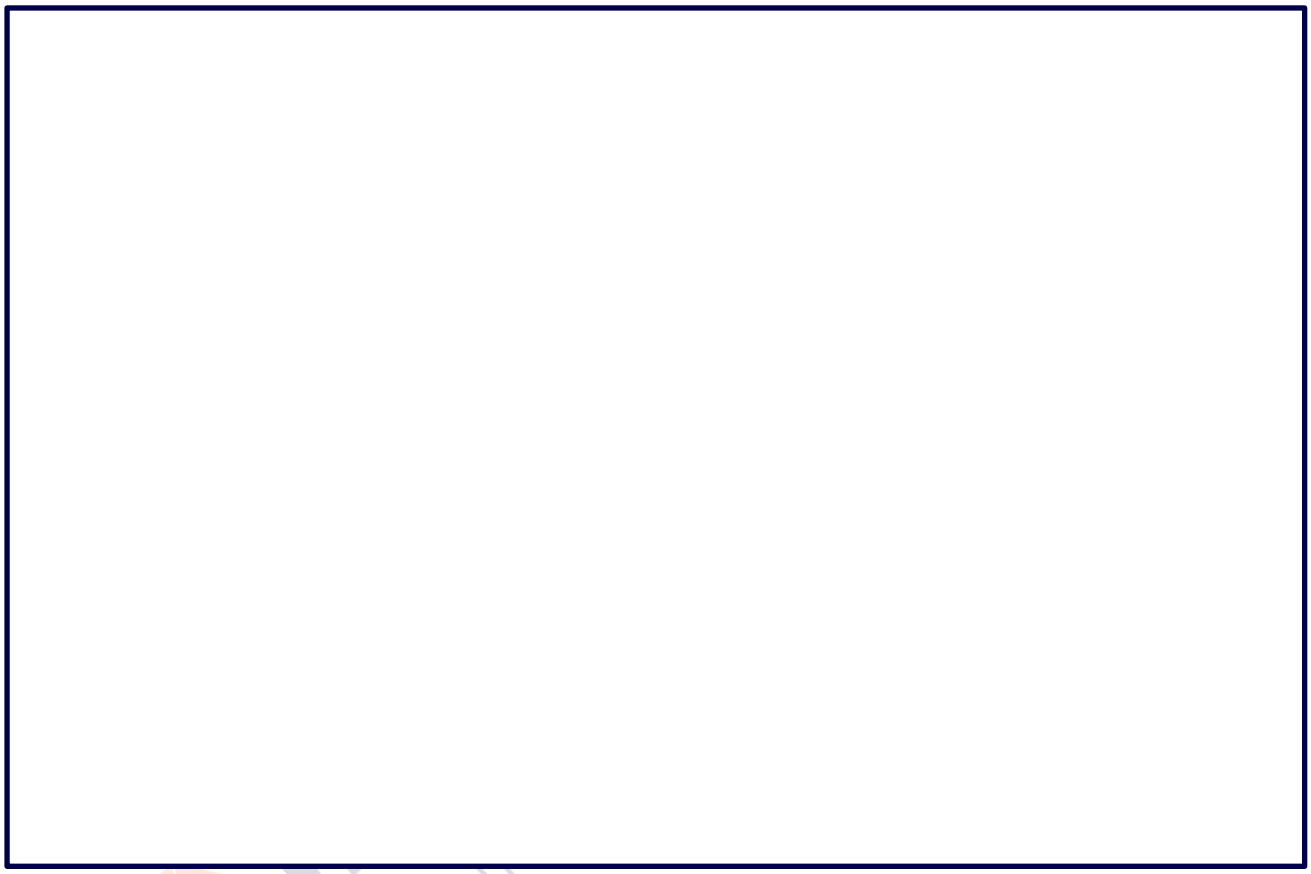
1. Diagram

❖ Long run Theory of production - The law of returns to scale

- ✓ Returns to scale operates in the long run.
- ✓ It refers to the relationship in between of changes in outputs and the changes in all inputs.
- ✓ There are 3 stages in the operation of returns to scale.

1. Increasing returns to scale. (Input < Output)
2. Constant Return to scale. (Input = Output)
3. Decreasing return of scale. (Input > Output)

Diagram



7. Economies of scale

The advantages of large scale production which lead to the reduction in Long run Average Cost (LAC) are known as economic of scale.

These are the outcomes of the expansion of the firm and the industry.

It has two types of economic of scale:

1. Internal economies of scale.

   Ex: technical economies, managerial economies, marketing economies, financial economies, risk bearing economies.

2. External economies of scale.

   Ex: A better infrastructure will be developed, availability of more information, collection of skilled labour, growth of supporting service and enhancing the development of an economy

Diseconomies of scale

It occurs when firms grow too large in size and expansion with rising Average Cost.

It has two types of diseconomies of scale

1. Internal Diseconomies of scale

   Ex: Administration problems, coordinating problems, communication problems, losing control over the trade disputes.

2. External Diseconomies of scale

   Ex: Pollution, health & sanitation problems, road congestion

The Revenue of the firm

1. Total Revenue (TR)

The total amount of sales income earned by selling the quantities during the given period of time.

TR = P * Q

- P= Price
- Q = Quantity Sold

2. Average Revenue (AR)

The average revenue earned by selling one unit during the given period of time.

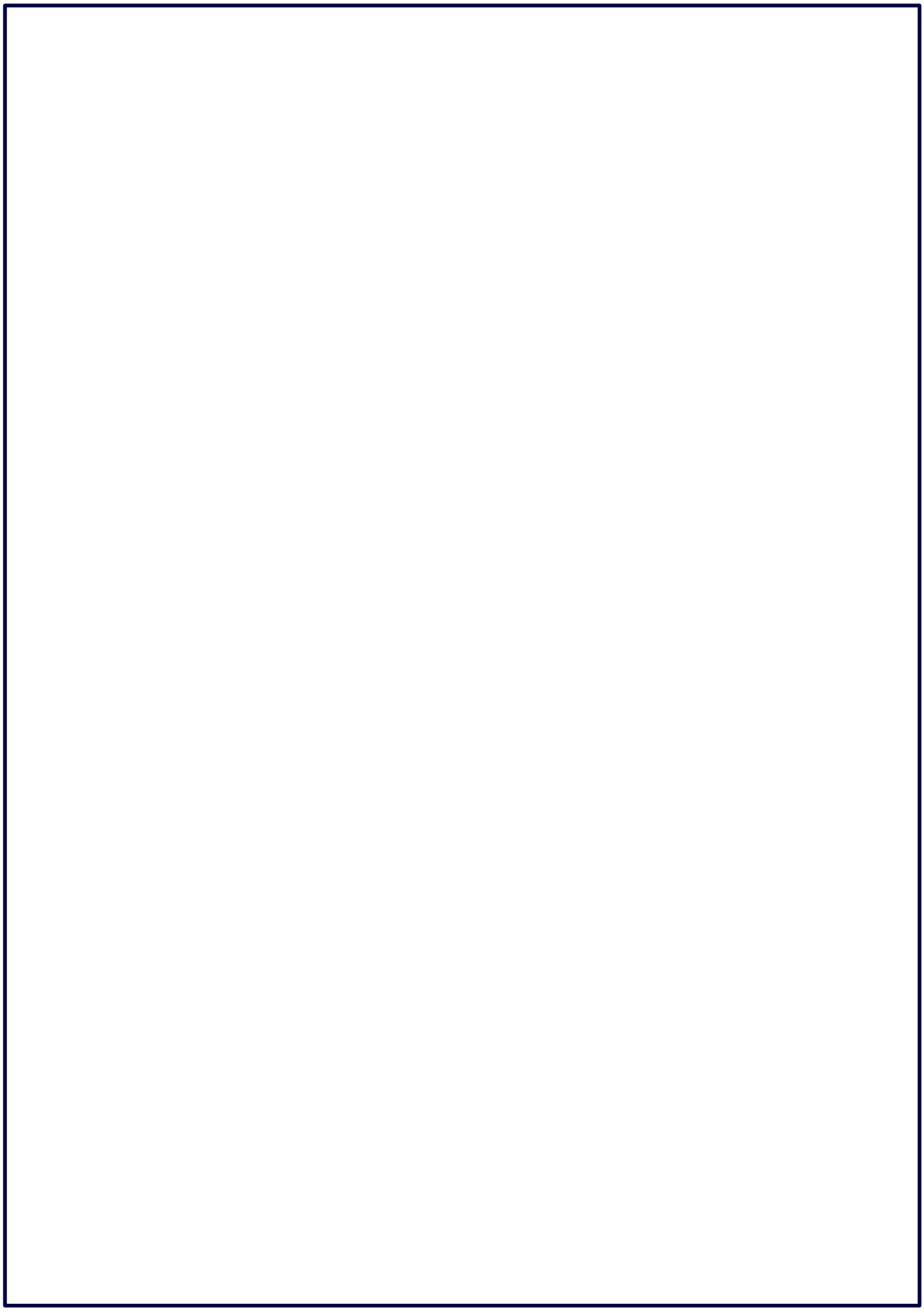
$$AR = \frac{TR}{Q}$$

3. Marginal Revenue (MR)

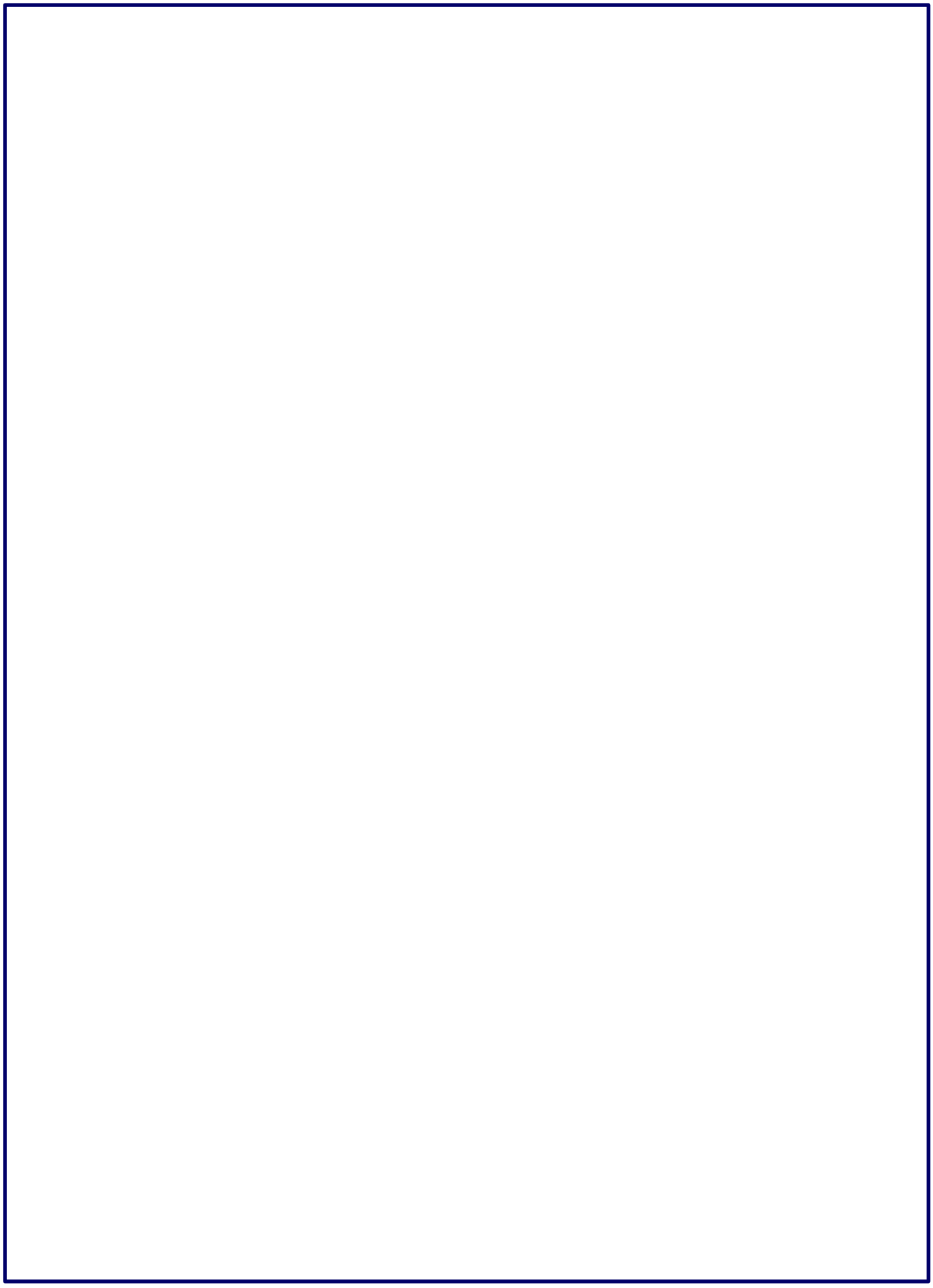
It is the change in the total revenue by selling one additional unit in the given period of time.

$$MR = \frac{\Delta TR}{\Delta Q}$$

Maximization of revenue by the firm



Maximization of profit by a firm



8. Objectives of the business Firm

1. Profit Maximization
2. Sustain in the market
3. Market growth & size
4. Increasing Market Share
5. Increasing Goodwill
6. Customer satisfaction
7. Providing Employment welfare
8. Improving Leadership
9. Diversification