OGUN DIGICLASS

CLASS: SECONDARY SCHOOL

SUBJECT: ECONOMICS

TOPIC: THE CONCEPT OF COST AND REVENUE

LEARNING OBJECTIVES

Describe	each of the cost and revenue concept
Identify	each cost and revenue concept graphically
State	the formula for each cost and revenue concept
Solve	data response questions on the topic

WHAT IS COST?

Cost in Economics means the expenses on inputs involved in production. e.g cost on raw materials, land, labour e.t.c. It is the reward due to factors of production.

The Economists see this mainly in terms of opportunity cost/Alternative cost

IMPLICIT AND EXPLICIT COST

- **Implicit/Internal Cost:** This is the cost incurred by the entrepreneur in producing certain unit(s) of a commodity which he could have earned in the best alternative use of his resources.
- **Explicit/External Cost:** This is the payment directly incurred in the production process e.g payment of raw materials, wages, overhead cost e.t.c

Explicit Costs	Implicit Costs
The electricity bill	Labor of owner who works for the company but does not draw a salary
Advertising in the newspaper	The capital invested in the business
Employee wages	The use of the owner's car, computer, or other personal equipment to conduct business

TYPES OF COST

- Total Fixed Cost(TFC) or (FC)
- Total Variable Cost(TVC) or (VC)
- Total Cost(TC)
- Average Total Cost(ATC) or (AC)
- Marginal Cost(MC)
- Average Fixed Cost(AFC)
- Average Variable Cost(AVC)

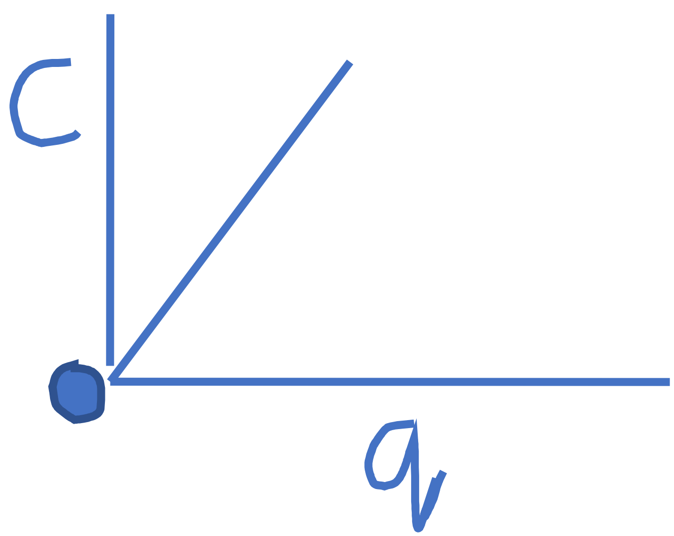
Total Fixed Cost

Total Fixed Cost(TFC): This cost is constant across all level of production. e.g cost of rent on land, building, cost on fixed materials like equipment, interest on loan etc.

Formula: TFC=TC-TVC

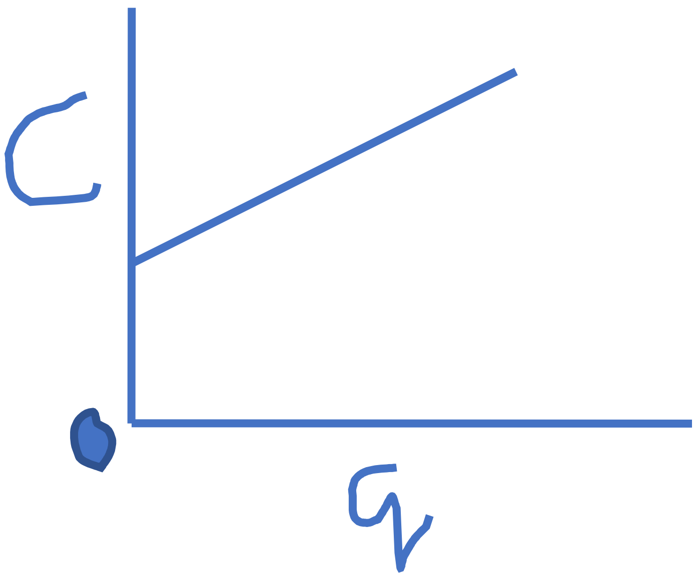
Total Variable Cost

- Total Variable Cost(TVC):This cost changes with the level of production. e.g cost on raw materials, overhead costs like, lighting, fuelling, salary,etc
- Formula: TVC=TC-TFC



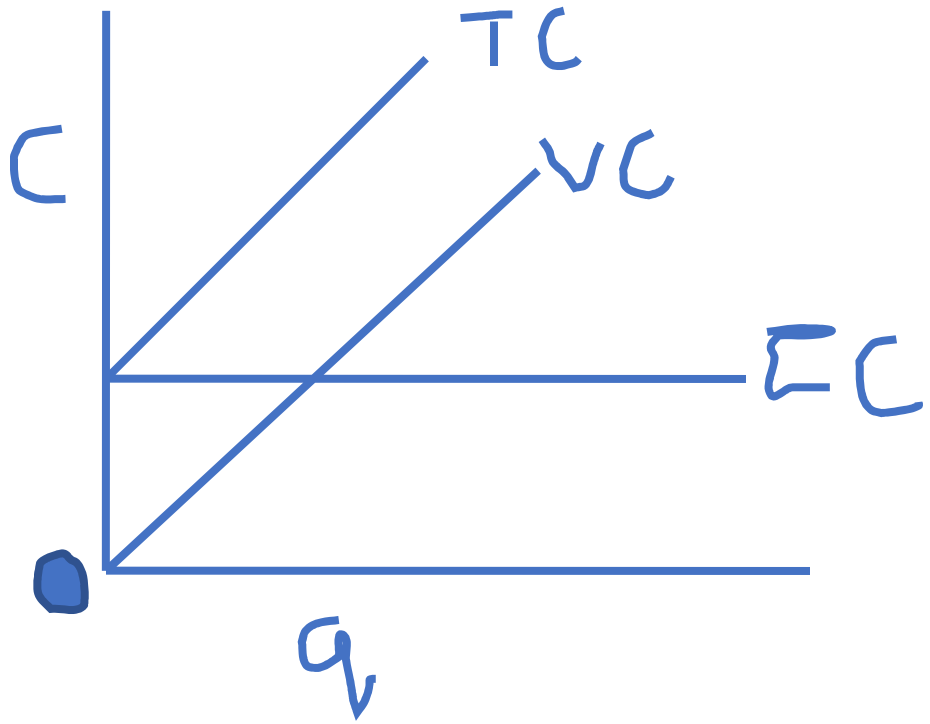
Total Cost

- Total Cost(TC):This is the entire cost involved in the production of certain quantities of a commodity
- Formula :TC=TFC+TVC or TC=AC/Q



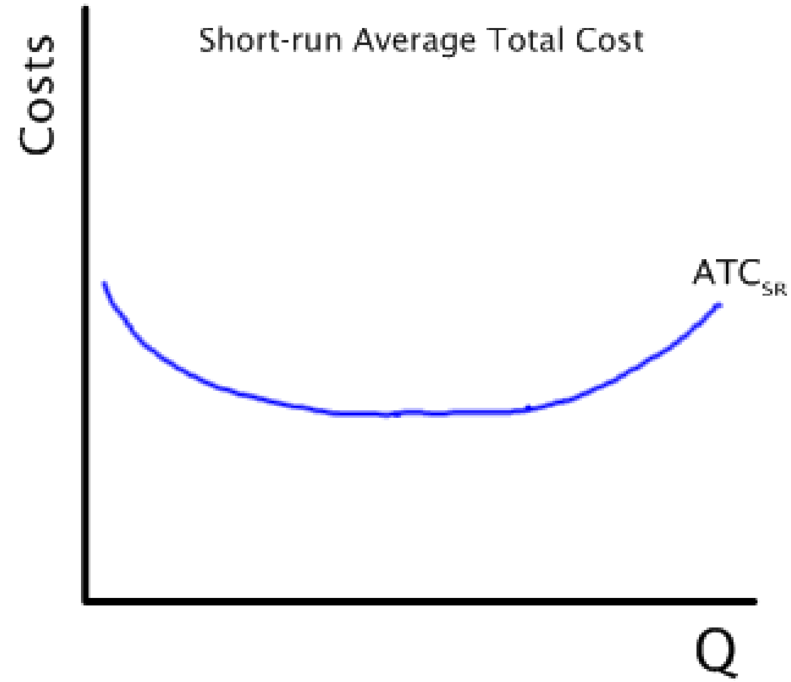
Relationship between TC, TFC & TVC

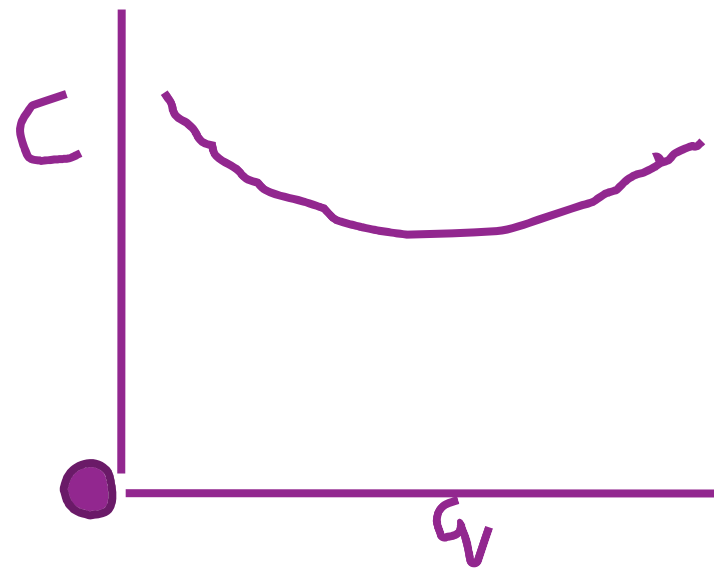
- Note* At output 0,FC=TC



AVERAGE TOTAL COST

- Average Total Cost: This is the cost per unit of an output.
- Formula: ATC=TC/Q or ATC=TFC+TVC/Q
- This cost assumes ‘u’ shape. This is due to economies and diseconomies of scale



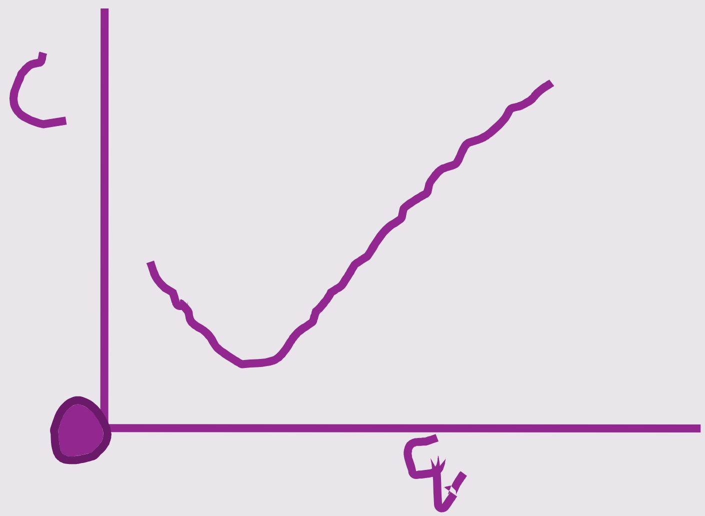


MARGINAL COST

Marginal Cost (MC): This is an additional cost incurred in producing an extra commodity

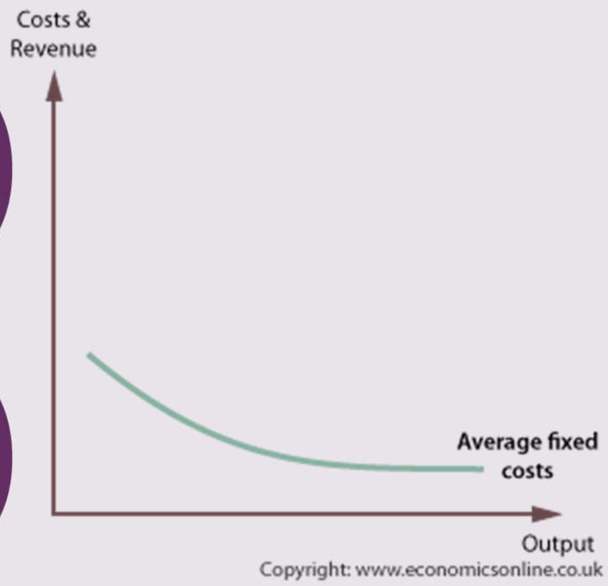
Formula:

$$MC = \frac{\text{change in Total Cost}}{\text{change in Output}} \quad \text{i.e} \quad \frac{TC2-TC1}{Q2-Q1}$$



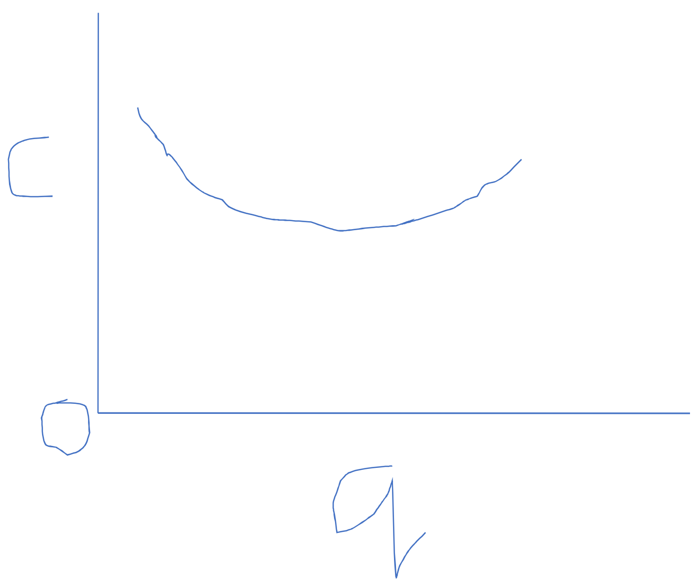
AVERAGE FIXED COST

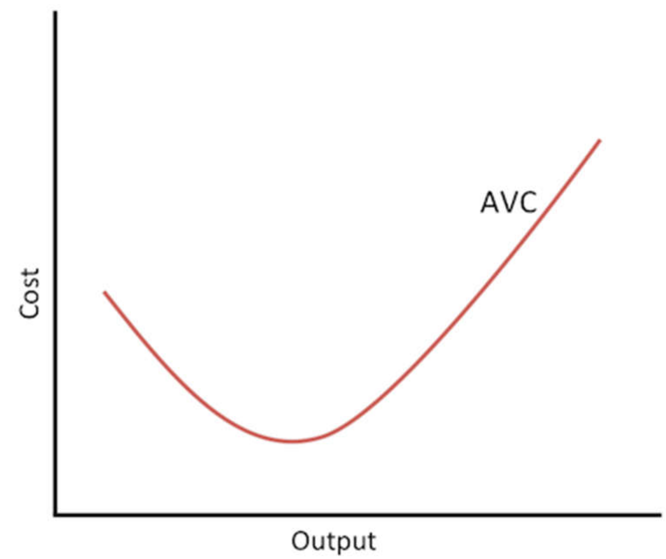
- Average Fixed Cost(AFC):This is fixed cost per unit of output. It is downward slopping all through
- Formula: AFC=TFC/Q



Average Variable Cost

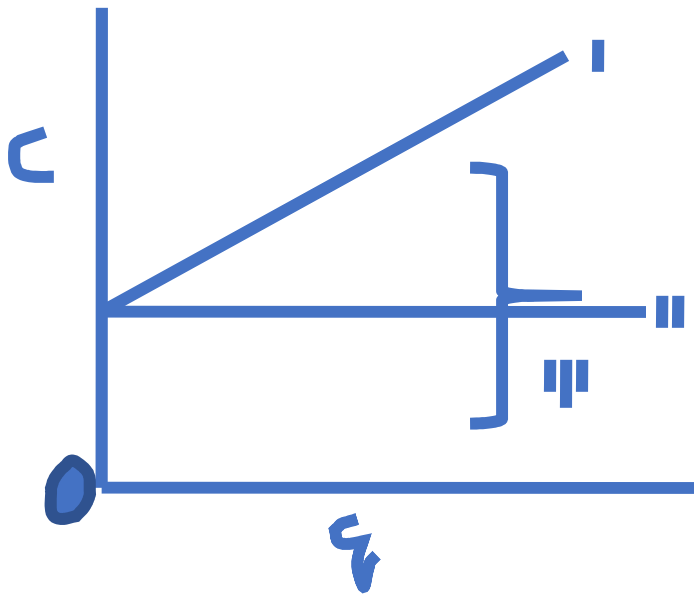
- Average Variable Cost(AVC):This is variable cost per unit of output
- Formula: AVC=TVC/Q
- This cost also assumes ‘u’ shape

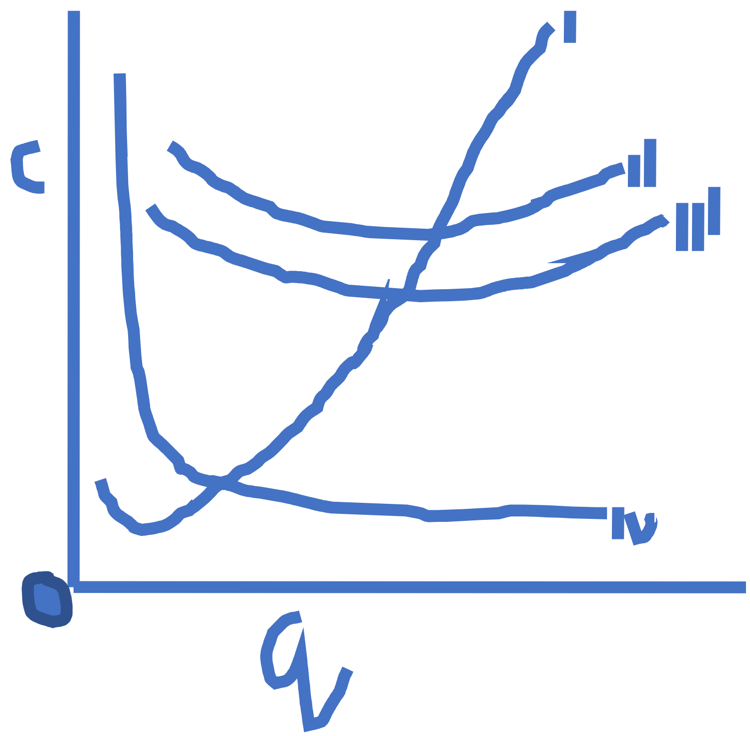




Exercise 1

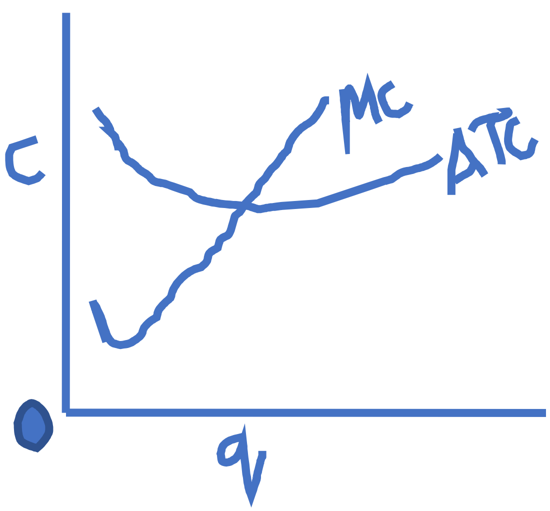
Identify the following cost curves

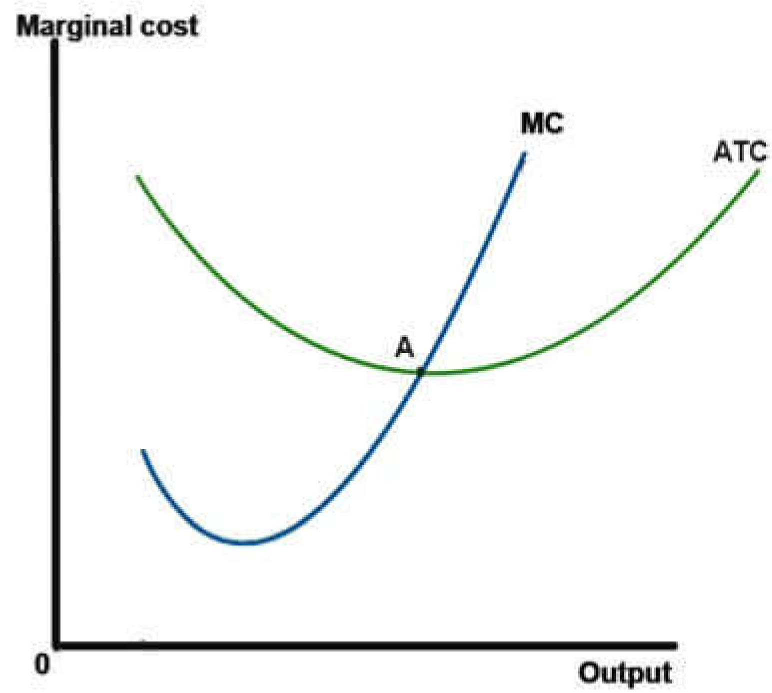




Relationship between MC & ATC

- When MC is less than ATC,ATC is falling
- When MC is equal to ATC,ATC is at its minimum
- When MC is greater than ATC,ATC is rising(m/j,2019,no1)





WORKINGS

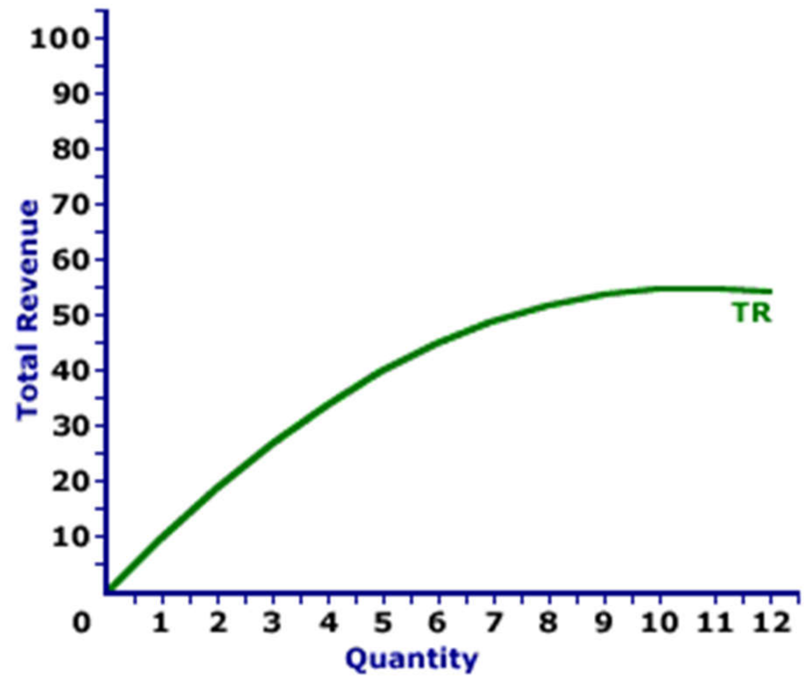
Output	TFC	TVC	TC	ATC	MC	AFC	AVC
0		-	5	-	-	5	-
1		5					
2		10					
3		18					
4		24					
5		25					

REVENUE

This is the income derived by a producer or firm from business activities from the sale of his products

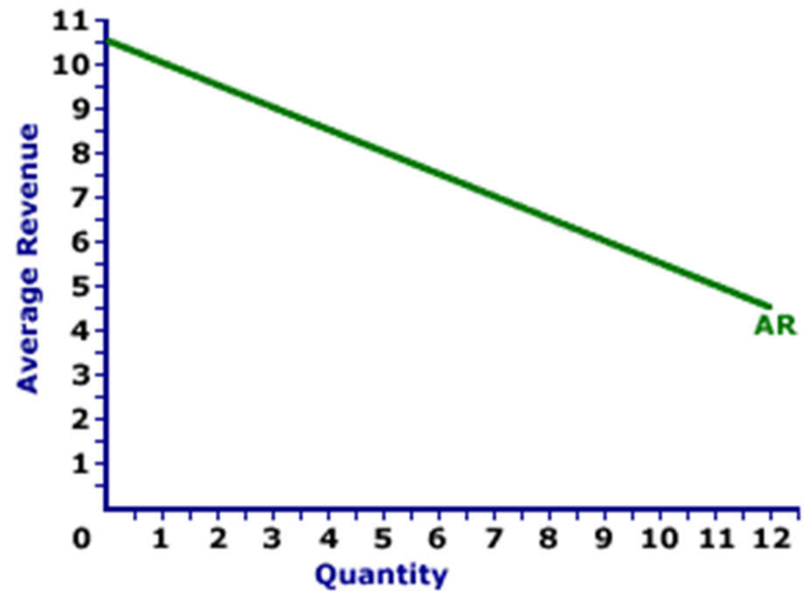
TOTAL REVENUE(TR)

- This is the total income which a firm derives from the sale of its products.
- TR=AR×Q



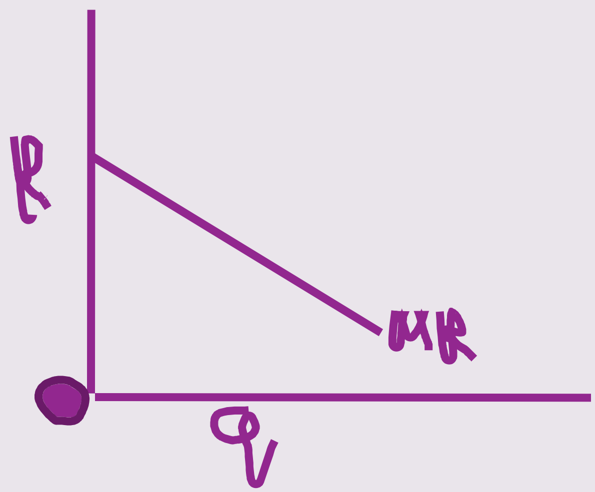
AVERAGE REVENUE(AR)

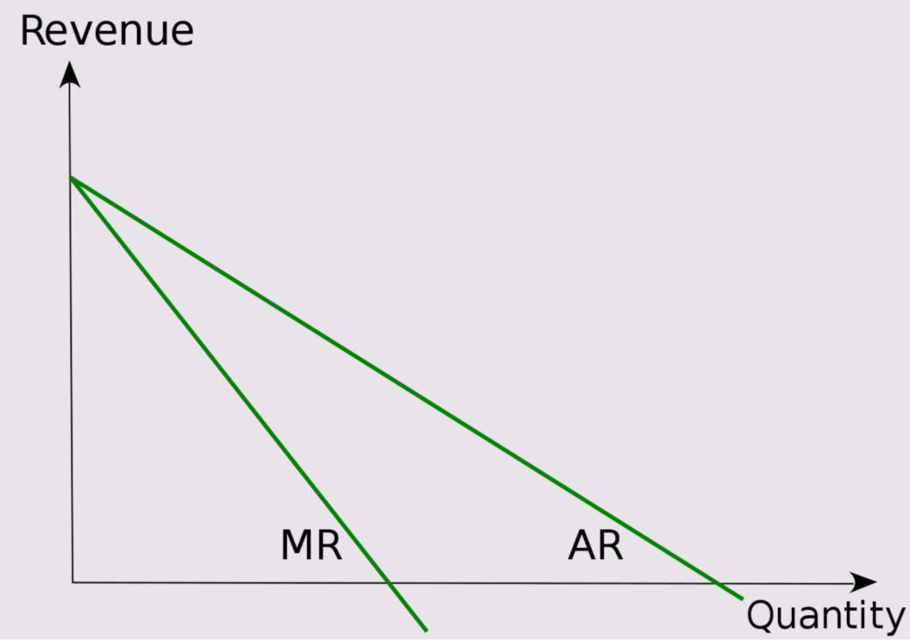
- This is the same thing as the price per unit of the commodity.
- AR=TR÷Q



MARGINAL REVENUE (MR)

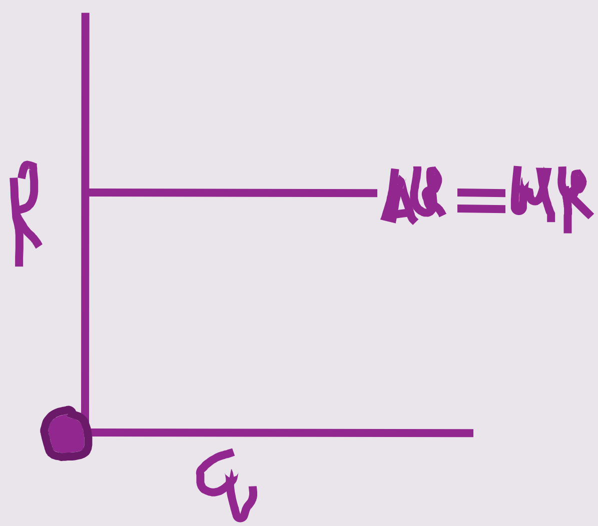
- This is the additional income earned by selling an extra unit of a commodity.
- MR= $\frac{\Delta TR}{\Delta Q} = \frac{TR_2 - TU_1}{Q_2 - Q_1}$

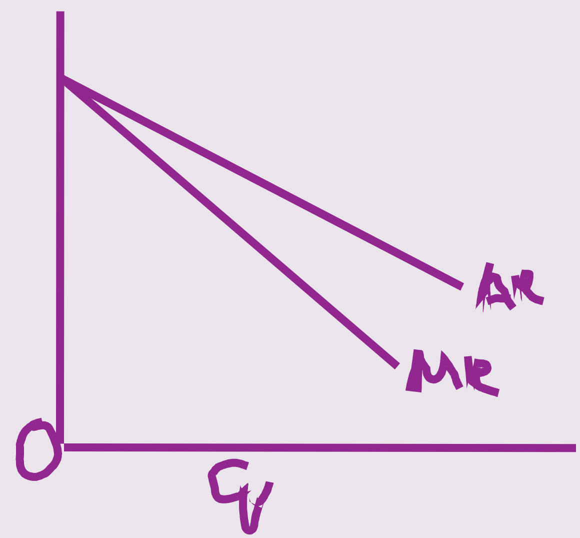




AR&MR IN A PERFECT AND MONOPOLIST MARKET

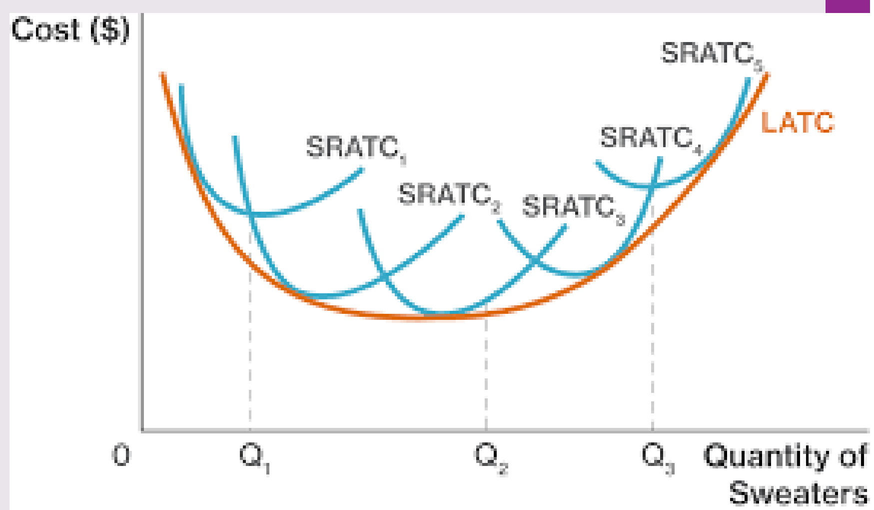
- In a perfect market, both the AR&MR are horizontal i.e. their figure is fixed.
- In Monopolistic Market, both the AR&MR are downward slopping but AR is always above MR.





THE CONCEPT OF SHORT-RUN AND LONG-RUN

- Note*in the short-run there is at least a fixed factor of production e.g. land
- In the long run however, all factors of production are variable



CALCULATIONS ON TR,AR&MR

Quantity sold(output in kg)	Total Revenue(TR in #)	Average Revenue(AR in #)	Marginal Revenue(MR in #)
1	50	C=	-
2	140	D=	F=
3	210	E=	G=
4	A=	70	H=
5	B=	60	I=

PROFIT

- This is the gain derived from economic activities.
- Profit=TR-TC
- Note*TR=P(AR)×Q and TC=AC×Q

PROFIT AND CASHFLOW

KNOWING YOUR KEY TERMS

CASHFLOW AND PROFIT

- Cash flow is the actual money going in and out of your business
- Profit is your net income after expenses are subtracted from sales
- A business can be profitable and still not have adequate cash flow
- A business can have good cash flow and still not make a profit

- In the short term(short-run),many businesses struggle with either cash flow or profit
- Rapid or unexpected growth can cause a crisis of cash flow and/or profit
- Both cash flow and profit are necessary to stay in business over the long term(in the long-run)

ASSIGNMENT

Fill In The Empty Boxes. Show Your Workings Clearly.

Output(KG)	TFC(#)	TVC(#)	TC(#)	ATC(#)	MC(#)	AFC(#)	AVC(#)
1	10	5	A=	F=	-	O=	T=
2	10	10	B=	G=	K=	P=	U=
3	10	18	C=	H=	L=	Q=	V=
4	10	24	D=	I=	M=	R=	W=
5	10	30	E=	J=	N=	S=	X=