Show that AR = Price

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

$$AR = \frac{Q \times P}{Q}$$

$$AR = Price$$

Q. **Relationship between TR, MR, AR, when the Price remain constant.**

Ans. Under Perfect Competition, Price of the commodity remain constant because a firm is only a price taker. The relation between AR, MR & R can be explained with help of table & diagram

Table:

Output	AR = P	TR	MR
1	10	10	10
2	10	20	10
3	10	30	10
4	10	40	10
5	10	50	10
6	10	60	10

It is clear from the diagram that when price is constant,

i. AR = MR

ii. TR increase at constant rate

Table:

Output	AR = P	TR	MR
1	10	10	10
2	10	20	10
3	10	30	10
4	10	40	10
5	10	50	10
6	10	60	10

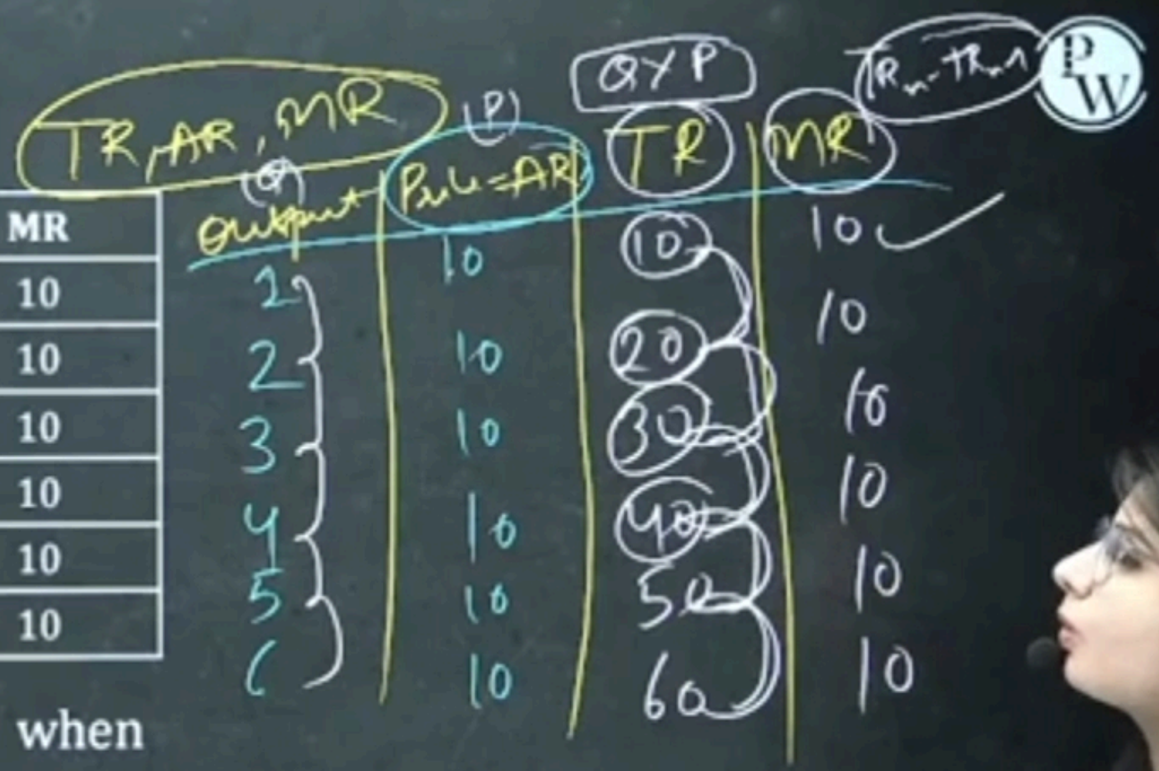

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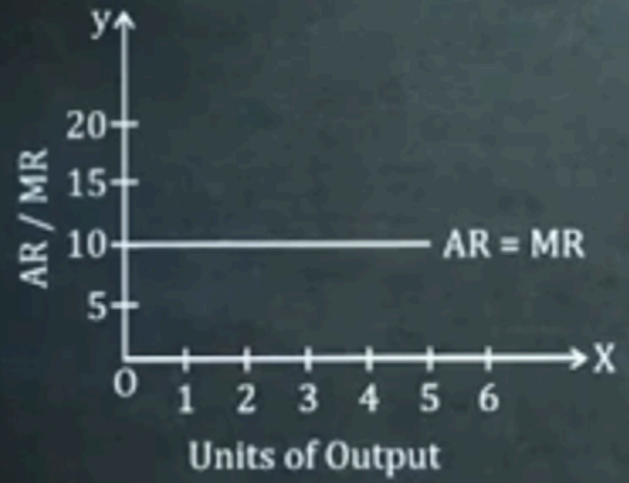
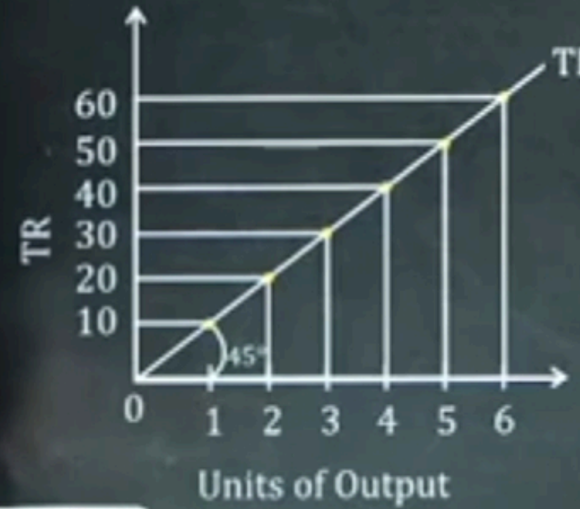
Diagram



(Fig - I)



(Fig - II)

It is clear from the diagram that when a price of commodity is constant, then Average Revenue of a firm is equal to Marginal Revenue of the firm & both AR – MR curve is

horizontal parallel to X-axis (Fig – I)

In (Fig – II), TR curve starts from origin and is a straight line making an angle of 45° from the origin because TR of the firm increase at constant rate.

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5	10	50	10
6	10	60	10

It is clear from the diagram that when price is constant

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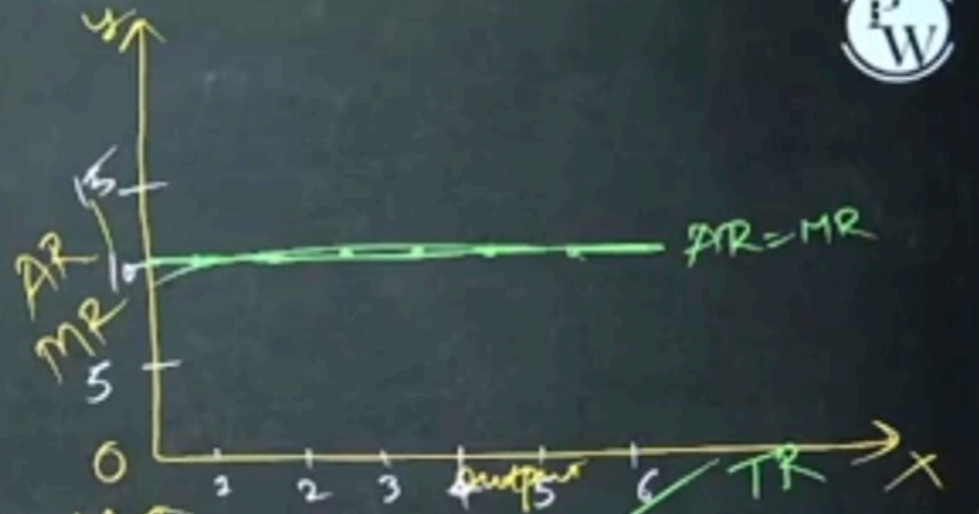
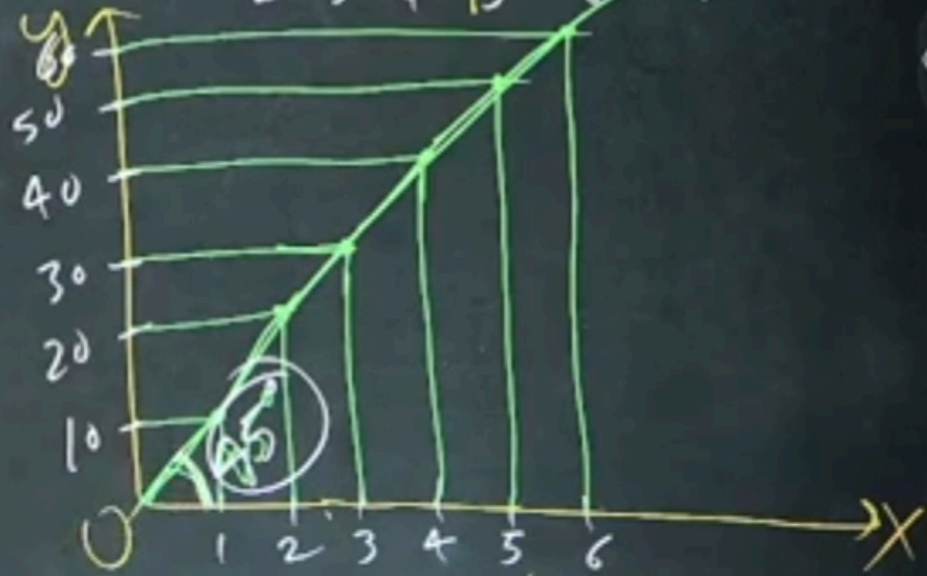
ii. constant rate





Q. Relationship between TR, MR, AR, when the Price does not remain constant.

Ans. When Price does not remain constant, then the producer can sold more of the commodities at a reduced Price level.

Table:

Output	P = AR	TR	MR
1	10	10	10
2	9	18	8
3	8	24	6
4	7	28	4
5	6	30	2
6	5	30	0
7	4	28	-2

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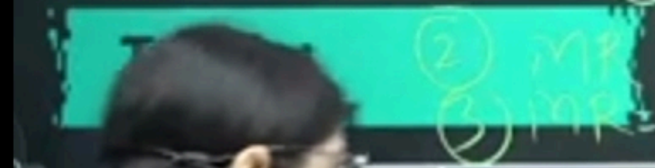

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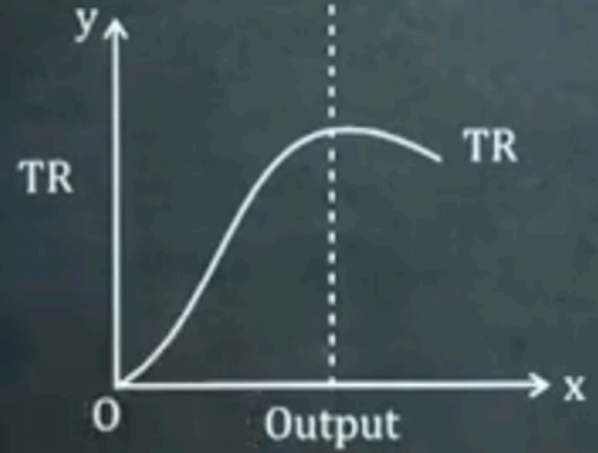
(1) AR ↓, MR ↓ faster rate (AR > MR)
↓ TR ↑ at Diminishing Rate
(2) MR = 0, TR ach. its max pt.
(3) MR = -ve, TR decline
(4) MR = 0, -ve, AR ≠ 0, -ve

It is clear from the table that

- When AR declines, MR declines at faster rate (AR > MR)
- When MR decline, TR increases at diminishing rate
- When MR = 0, TR achieves its maximum point & TR achieves its maximum points & become constant.
- When MR is negative, TR starts declining.
- MR can be 0 or negative but AR can't be 0 or negative.

Diagram



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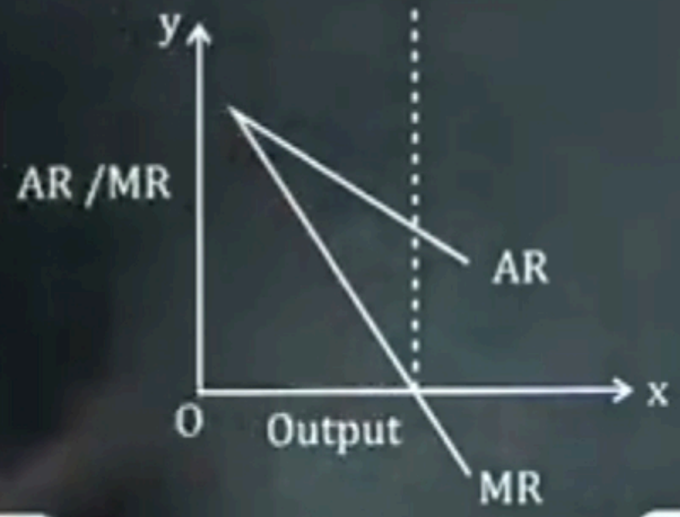

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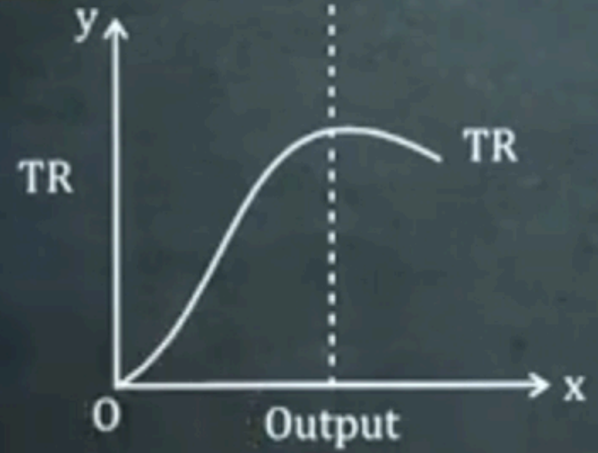
Diagram



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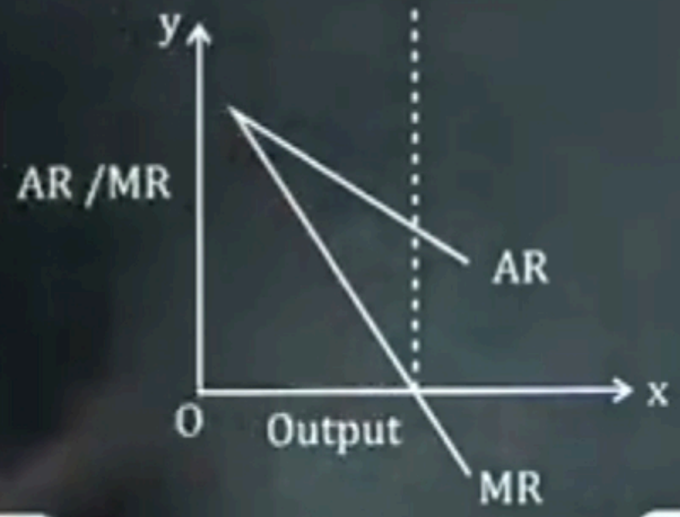

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