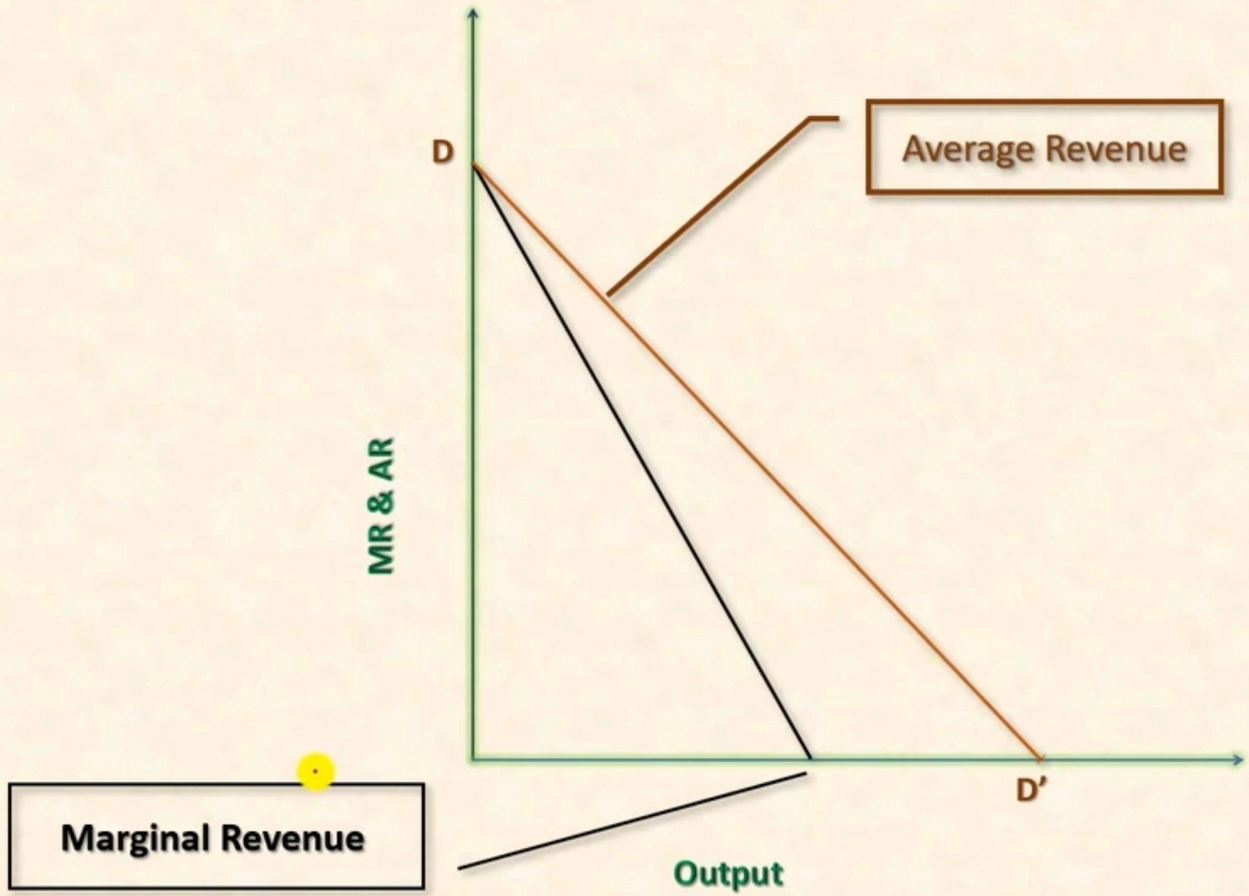
# Relation between AR, MR and Elasticity of demand (e)



# Relation between AR, MR and Elasticity of demand (e)

**ΔPDR and ΔQRD' (equiangular)**

$$\frac{RD'}{RD} = \frac{RQ}{PD}$$

$$\frac{RD'}{RD} = \frac{RQ}{RH}$$

$$e = \frac{RQ}{RQ - HQ}$$

$$e = \frac{RQ}{RQ - HQ} \qquad e = 1$$

$$e = \frac{AR}{AR - MR}$$

**ΔKRH and ΔPDK (Congruent)**

$$PD = RH$$

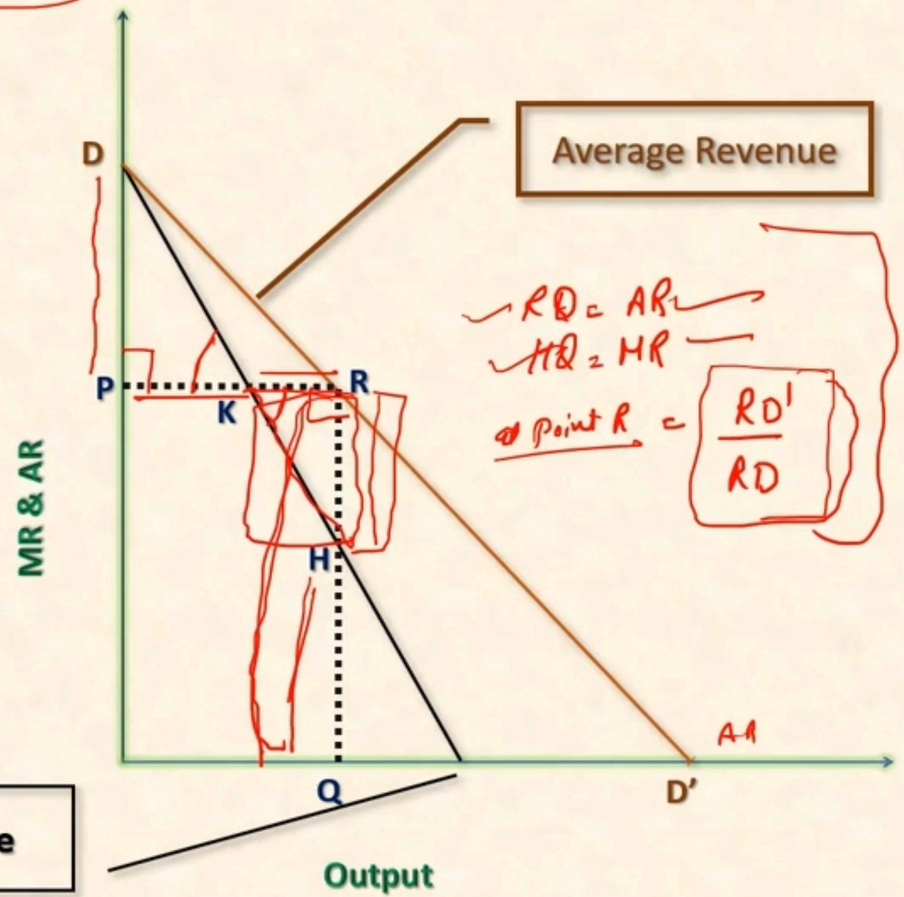
$$e(AR - MR) = AR$$

$$eAR - eMR = AR$$

$$eAR - AR = eMR$$

$$AR(e - 1) = eMR$$

$$MR = AR\frac{(e-1)}{e}$$




SUBSCRIBE

$e(AR-MR) = AR$

$eAR - eMR = AR$

$eAR - AR = eMR$

$AR(e-1) = eMR$

$$AR\frac{(e-1)}{e} = MR$$

$$AR\left(\frac{1-1}{p}\right) = MR$$

$e = 1$

RQ

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RH

RQ

---

Q - HQ

RQ

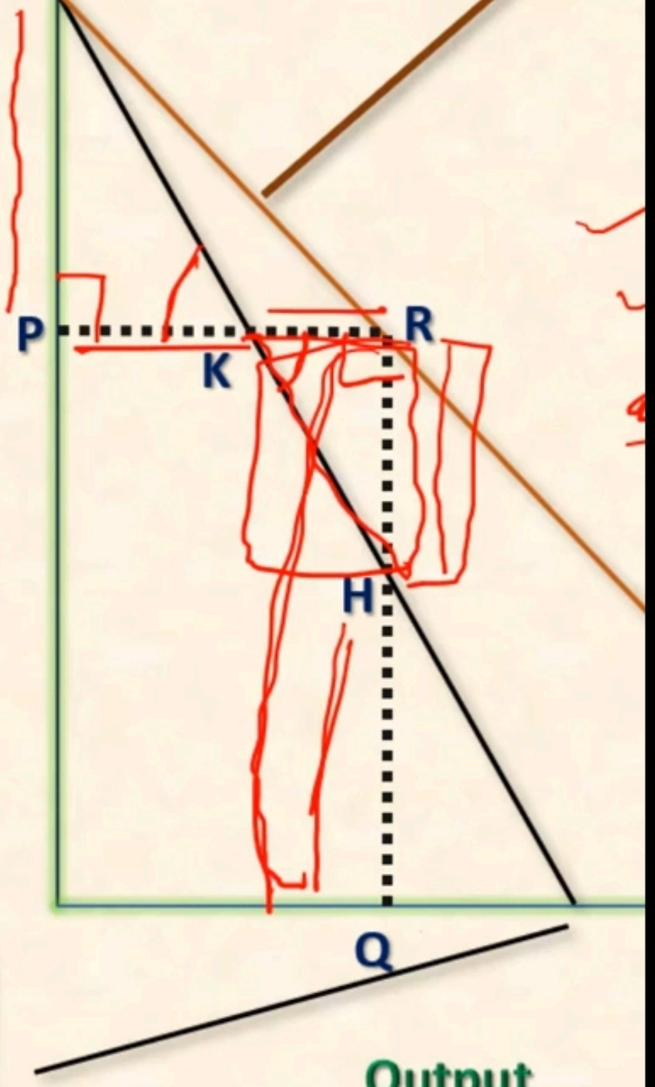
---

Q - HQ

AR

---

R - MR




**Marginal Revenue**

SUBSCRIBE

$e(AR-MR) = AR$

$eAR - eMR = AR$

$eAR - AR = eMR$

$AR(e-1) = eMR$

$$AR\frac{(e-1)}{e} = MR$$

$AR\left(\frac{1-1}{1}\right) = MR$

$AR(0) = MR$

$MR = 0$

RQ

---

RH

RQ

---

Q - HQ

RQ

---

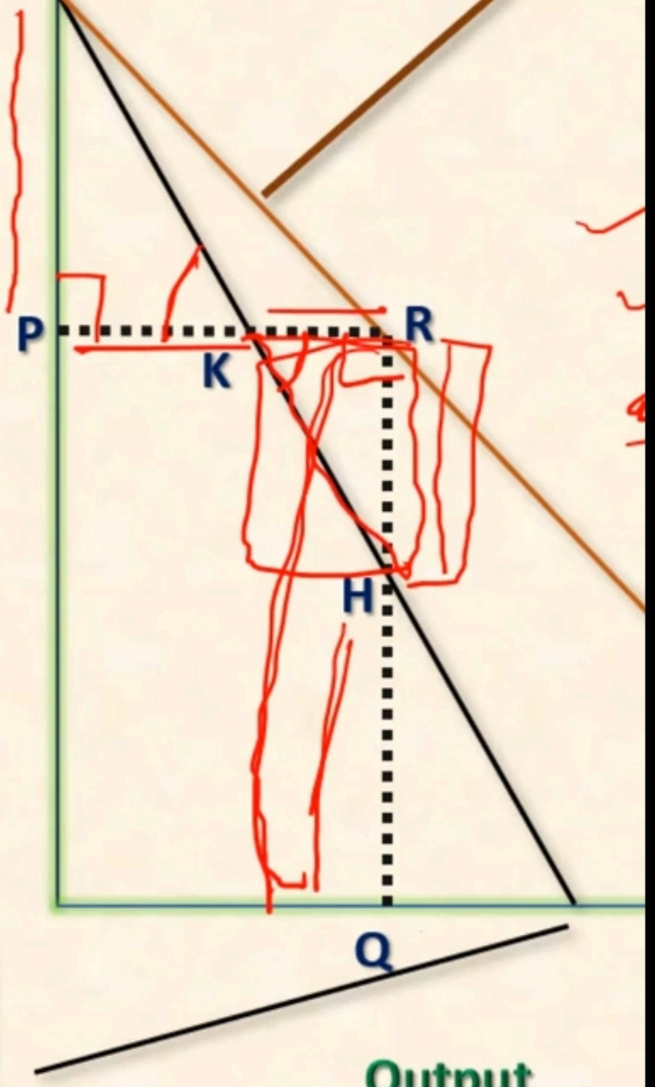
Q - HQ

AR

---

R - MR

$e = 1$




**Marginal Revenue**

SUBSCRIBE

$e(AR-MR) = AR$

$eAR - eMR = AR$

$eAR - AR = eMR$

$AR(e-1) = eMR$

$$AR\,\frac{(e-1)}{e} = MR$$

$e=1 \quad MR=0$

$e<1 \quad MR<0$

$AR\left(\frac{0.2-1}{0.2}\right) = MR$

$AR\left(\frac{-0.8}{0.2}\right) = MR$

$MR = -4AR$

RQ

---

RH

RQ

---

Q - HQ

RQ

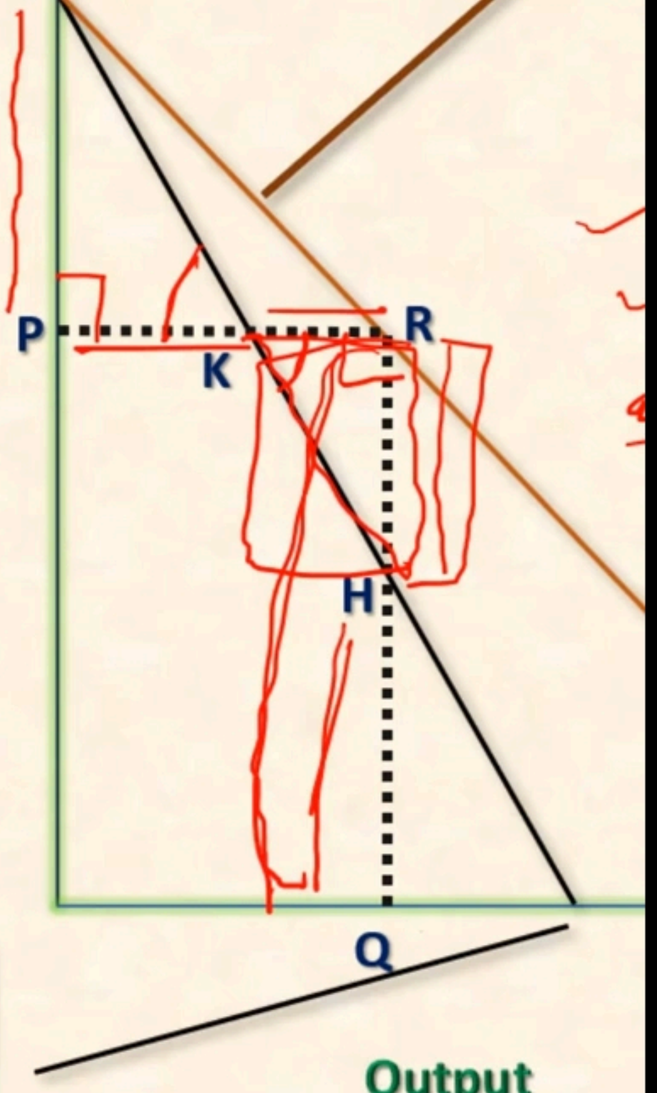
---

Q - HQ

AR

---

R - MR




**Marginal Revenue**

$e(AR-MR) = AR$

$eAR - eMR = AR$

$eAR - AR = eMR$

$AR(e-1) = eMR$

$AR\frac{(e-1)}{e} = MR$

$AR\left(\frac{e-1}{e}\right) = MR$

$AR\left(\frac{1}{2}\right) > MR$

RQ

---

RH

RQ

---

Q - HQ

RQ

---

Q - HQ

AR

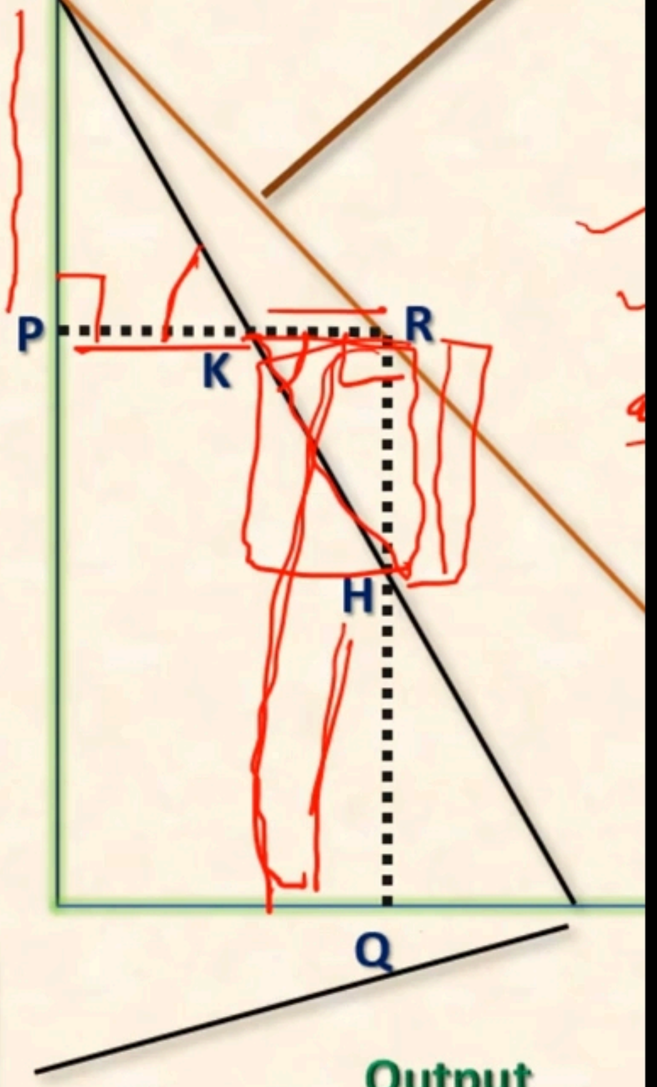
---

R - MR

$e=1$ MR = 0

$e<1$ MR < 0

$e>1$ MR




**Marginal Revenue**

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