

INCOME ELASTICITY

$$E_I = \frac{\% \Delta Q_D}{\% \Delta I} \quad | \text{c.p}$$

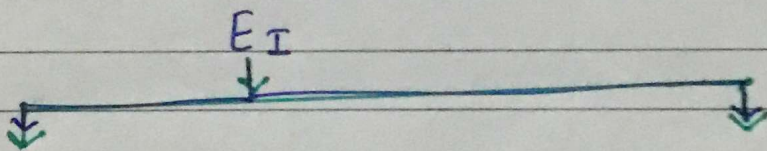
$$= \frac{\Delta Q_D}{\Delta I} \cdot \frac{I}{Q_D}$$

if small change in I

$$E_I = \left(\frac{\partial Q_D}{\partial I} \right) \cdot \left(\frac{I}{Q_D} \right)$$

if E_I is positive : Goods/com. is normal.

if E_I is negative : Good/com. is Inferior.
(eg. refined oil vs oliveoil)
(Maruti car vs Mercedes Benz car)



$$0 \leq E_I \leq 1$$

1% change in I will lead to less than or equal to 1% change in Q_D .

\therefore com. is Essential/
Necessary
(eg. salt, sugar)

$$E_I > 1$$

1% change in I will lead to more than 1% change in Q_D

\therefore com. is Luxury/
Non essential.

$E_I < 0 =$ Inferior commodity

$0 \leq E_I \leq 1 =$ Necessary / Essential commodity

$E_I \geq 0 =$ Normal commodity

$E_I > 1 =$ Luxury commodity

CROSS ELASTICITY

$$C_E = \frac{\% \Delta Q_D \text{ of Com X}}{\% \Delta P \text{ of Com Y}} \quad | \quad C.P$$

a) If Com. X and Com Y are substitutes Com.

$$C_E > 0 \quad (P_Y \uparrow, Q_D^X \uparrow)$$

b) If Com. X and Com Y. are complements

$$C_E < 0 \quad (P_Y \uparrow, Q_D^X \downarrow)$$