

→ Correlation : types :

Pearson Correlation Coefficient (PCC)

Spearman Rank Correlation Coefficient (SRCC)

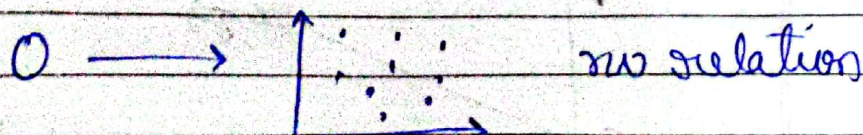
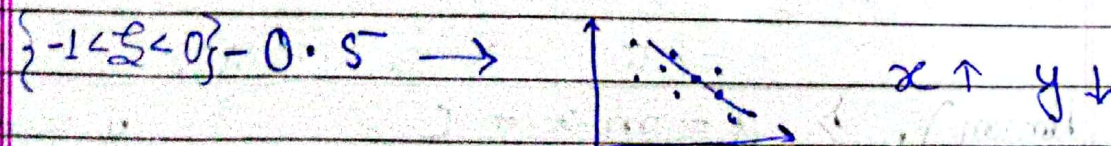
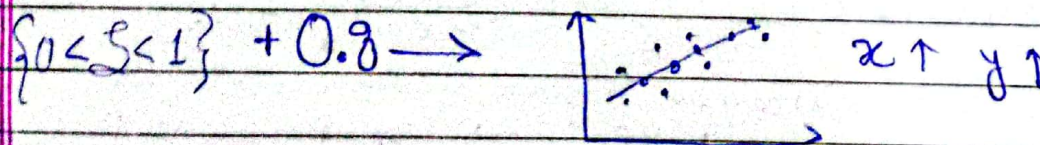
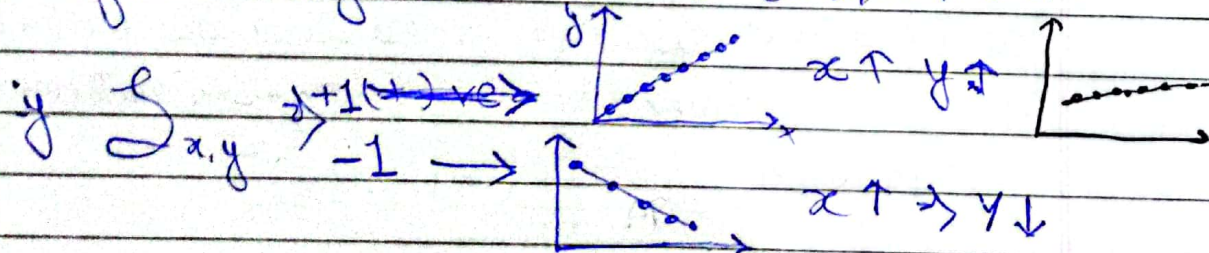
→ PCC :- (S) i.e. no ;

$$r_{x,y} = \frac{\text{cov}(x,y)}{\sigma_x * \sigma_y}$$

value of $r_{x,y}$ can be either (+)ve or neg(-)ve

$$r_{x,y} = \frac{\frac{1}{n} \sum (x_i - \mu_x)(y_i - \mu_y)}{\sqrt{\frac{1}{n} \sum (x_i - \mu_x)^2} \times \sqrt{\frac{1}{n} \sum (y_i - \mu_y)^2}}$$

& $-1 \leq r_{x,y} \leq 1$, so possible values for $r_{x,y}$ is -1 to 1 or b/w them.



→ Not capture slope

→ Only captures linear relationship.