

ANOVA (Analysis of Variance) and its assumption

Definition \Rightarrow ANOVA is a statistical method used to compare the means of 2 or more groups

* Using variance, you want to determine, if the mean value of two or more than two group are same or different.

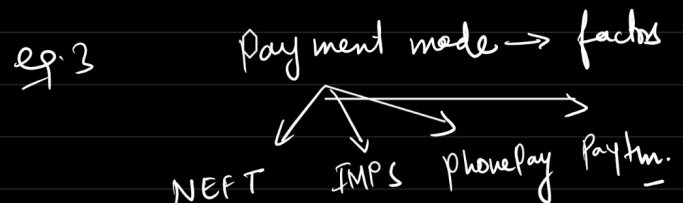
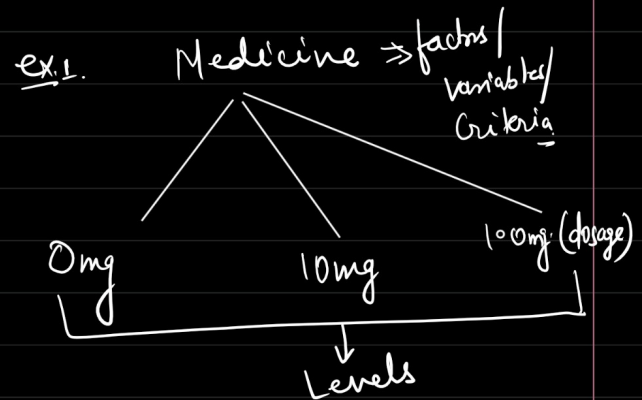
\rightarrow Generally ANOVA is used for more than 2 groups

\rightarrow Reason: for two groups you can use t-test.

ANOVA terms

* Factor / variables / criteria

* Levels



* Assumptions of ANOVA

- The population from which samples are drawn should be normally distributed.
- The sample should be independent of each other/random.
- Absence of outliers
- Homogeneity of variance:- Homogeneity means that the variance among the groups should be approximately equal.

	Pop.	Sample	S_1	S_2	S_3
std dev σ		S			
var σ^2		S^2	$S_1^2 = S_2^2 = S_3^2$		