6. Use the following data to test the hypothesis

$$H_0 : \sigma_1^2 = \sigma_2^2$$

Against the alternative

$$H_0 : \sigma_1^2 \neq \sigma_2^2$$, Take $\alpha = 0{,}05$.

$$n_1 = 13, \bar{x}_1 = 24.1, s_1 = 5.6, n_2 = 10, \bar{x}_2 = 15.4, \; s_2 = 4.1$$

7. Test the hypothesis of independence of the following two way classifications. Take $\alpha = 0.05$.

A

	A_1	A_2	A_2
B_1	25	35	65
B_2	45	50	100
B_3	65	100	125

8. In a 4x6 analysis of variance of two factors A and B with four observations per cell, we obtained the following data:

SS of A = 280, SS of B = 920, Subtotal SS=5500. Total SS = 7700. Complete the analysis of variance table. Test the hypothesis of the equality of the means of the factors A and B. Take $\alpha = 0.05$.

9. A paired experiment produced the following observations on X and Y. You are asked to test the hypothesis that the two populations of X and Y have identical mean. Take $\alpha = 0.05$.

Pair	1	2	3	4	5	6	7	8	9	10	11
X	15	16	16	17	18	20	22	26	29	30	27
Y	20	11	12	18	19	22	19	18	31	29	32

10. Three random samples were taken from three populations. The following data are given, $T_1 = 120$, $T_2 = 150$ and $T_3 = 200$. $n_1 = 10$, $n_2 = 15$ and $n_3 = 18$. It is that Total sum Squares = 400. Test the hypothesis that the three populations have the same mean. Take $\alpha = 0.05$.
$\alpha = 0.05$.

11. Two independent samples were taken from two populations, The number of defective items in the two samples were 40 and 50 with sample sizes as 100 and 120. Calculate a 90% confidence interval fpr the difference of the proportions of defective items in the two populations.