

Exercises:

- I. In department of animal production, they are interested in discovering the effect of three enzymes A, B and C for increasing daily milk of a specified type of cows. 18 cows randomly chosen and each 6 cows of them given one of the three enzymes, then the increasing in milk is measured with liters as follows:

A	B	C
16	9	14
17	13	19
11	12	13
15	11	11
18	15	13
19	12	14

Is there exist a significant difference between the three enzymes in increasing the average of daily milk at $\alpha = 0.05$.

Solution:

- I. Hypotheses:

$$H_0: \mu_1 = \mu_2 = \mu_3$$

H_a : at least one μ_i is different

- II. Test Statistic:

Source of Variation	df	SS	MS	f
Treatments	2	48	24	3.75
Error	15	96	6.4	
Total	17	144		

- III. Rejection Region:

Reject H_0 if: $f > f_{0.05,2,15} = 3.68$

- IV. Decision

Since $3.75 > 3.68$

We reject H_0