ANSC/TPSS 603
Assignment 2 - CRD and RCBD

Water consumption of animals is measured over a standard period for animals on three diets: Standard, New #1, and New #2.

The data are as follows:

Replicate	1	2	3	4	5	6	7	8	9	10	X
Standard	14.2	10.3	10.7	9.7	13.1	15.0	10.7	14.7	12.2	11.4	122
New 1	15.7	9.3	12.4	10.0	14.7	15.8	12.3	16.0	13.0	12.7	131.9
New 2	16.3	10.4	11.9	13.2	13.7	24.9	13.3	16.2	14.3	13.0	147.2
X	46.2	30	35	32.9	41.5	55.7	36.3	46.9	39.5	37.1	401.1

$14.2^2 + ... + 13.0^2 = 5622.57$

$122^2 + ... + 147.2^2 = 53949.45$

$46.2^2 + ... + 37.1^2 = 16620.549$

1. A novice researcher decided to use a CRD method of analysis on the data.

   a. Complete the ANOVA table for the CRD analysis of the data.

   b. State your conclusion about the hypothesis that water consumption is unaffected by diet.

2. A researcher that has successfully completed 603 (not to be confused with the novice in question 1) realizes that the previous analysis is wrong, because each of 10 animals had been used three times (as a block), receiving each of the treatments in a random order.

   a. Complete the ANOVA table for the RCB analysis of the data.

   b. State your conclusion about the hypothesis that water consumption is unaffected by diet.

   c. State your conclusion about the hypothesis that water consumption is unaffected by individual animals.