

UNIVERSITY OF YAOUNDE I

Faculty of Arts Letters and Social Sciences

2nd Semester Examinations(3rd July 2009)

PSYCHOLOGY ⁴⁴² Statistics and Mathematics

Answer ALL QUESTIONS

- 1 Analyse the context in which the ANOVA technique is used in verifying hypotheses. (4 points)
- 2 Data has been collected on the performance of Boys and Girls in mathematics as follows

Boys	Girls
15	11
16	9
18	10
5	6
14	15
16	

- a) State and justify the Research Hypothesis
- b) Calculate the mean scores and standard deviations for the Boys and the Girls
- c) Verify the null Hypothesis and draw conclusions
Assume that an $\alpha = 0.05$ gives a critical value (read from the tables) of 2.15
(7 points)

3. A correlation between performance in History and geography is required
 - a) Formulate such a Hypothesis
 - b) What are the conditions for using the Pearson product moment correlation to establish such a relationship?
 - c) What are the factors which could influence such a relationship?
 - d) Use the data below to calculate the index of correlation between performance in History and Geography for 5 students in Form ONE in a Secondary School(Assume that the critical value of the Pearson correlation read from the table at $\alpha = 0.05$ is 0.56)
 - e) Draw conclusions.

History	Geography
14	10
15	11
16	14
17	16
14	13

(9 points)