



NATIONAL OPEN UNIVERSITY OF NIGERIA

91, Cadastral Zone, University Village Nnamdi Azikiwe Express way, Abuja

Department of Science Education, Faculty of Education. ...

COURSE CODE: EDU740 MARKING GUIDE

COURSE TITLE: MATHEMATICS METHODS

TIME ALLOWED: 2 HOURS 2 CREDIT UNITS

INSTRUCTION: ATTEMPT QUESTION 1 AND ANY OTHER TWO

1 a) Justify the inclusion of the study about ancient Greek Mathematicians in your course in spite of the present level of development in the field of Mathematics. **(10marks)**.

b) Briefly discuss the contributions of the following ancient Mathematicians to the development of Mathematics;

i) Archimedes **(10marks)** ii) Pythagoras **(10marks)**

2) At the preoperational stage of Jean Piaget theory of cognitive development, the child lacks conservation. a) How did Piaget illustrate this? **(11marks)**

b) How does his idea guide you as a Mathematics teacher? **(9marks)**

3) By expanding the expression $(x + y)^n$, when $n=5$. Find the followings:

a) i. how many terms are involved?

ii. What is the coefficient of x in the third term?

iii. Write down the second term

iv. What is the sum of the coefficients of x in the second and last terms?

v. What is the exponent of x in the fourth term?

b) With the condition given in (a) above, evaluate $(x + y)^n$

i) when $y = 1$

ii) when $y = -1$

(20marks)

4) Without writing a lesson plan use the 3 steps presented below to explain the practical approach by which you will teach your JS1 students that the circumference of a circle $C = 2\pi r$.

1) the materials required **(5marks)**

2) the activities **(11marks)**

3) the presentation of result **(4marks)**

TOTAL = (20marks)