

Dennis

**ASSIGNMENT**  
**BMA 1106 FOUNDATION MATHS**

1. Solve for x in the equation

$$4^{(2x+2)} \div 2^{(x-3)} = \frac{1}{32^{(x+1)}} \quad (4\text{mks})$$

2. The fourth, sixth and tenth terms of an arithmetic progression are in Geometric progression if the seventh term of the AP is 10 find

- i) Common ratio and of first term of the G.P. (6mks)  
ii) The sum of the 1<sup>st</sup> 9 terms of the GP (3mks)

3. Find the simplest form of  $\frac{2 \times (3^{n+1}) + 7(3^{n-1})}{3^{n+1} - 2(1/3)^{(1-n)}}$  (3mks)

4. Expand  $(2+2\sqrt{3})^4$  leaving the answer in simplified form (3mks)

5. Find x in the equation

$$\log_5(x-4) + \log_5 8 = \log_5 16 - 2 \quad (4\text{mks})$$

6. Find the value of x in which the matrix k

- (a) Has no inverse

$$k = \begin{pmatrix} 3x^2 & (x+2) \\ (x+4) & 2 \end{pmatrix}$$

7. Find the first five terms of the binomial expansion

- (a)  $\sqrt[5]{1-3x}$  in ascending powers of x. hence find the value of  $\sqrt[5]{0.4}$  correct to 3 decimal places (6mks)