1. a) Transform the Cartesian equation of ellipse + is equal to its polar form.

b) Transform the equation r= to rectangle form.

2. a) Find to 4 decimal places the root near 3 of the equation - = 20, using simple iteration.

b) In the following figure, in , = , = , AC = 16cm. Find BC.

16cm66

B

A

C

60

3) List the first 5 terms of each sequence (from to ).

a) =

b) =

4) Evaluate the integral where h=0.05 using

i) Trapezoidal value

ii) Simpson’s rule and compare with exact value

5) The matrix is

a) Scalar matrix b) 2\*3 matrix c) diagonal matrix d) none of the above