

Summary

From this lecture you learnt that

Exponential function is an algebraic function.

It can be expanded as series and denoted as e^x .

This e^x is applicable to all real values of x .

In series form the real x is exponentiated as $e^x = 1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} + \dots$

De Moivre's theorem states that if ' n ' is any integer, positive or negative then $(\cos \theta + i \sin \theta)^n = \cos n\theta + i \sin n\theta$ and if ' n ' is a fraction positive or negative then $\cos n\theta + i \sin n\theta$ is one of the values of $(\cos \theta + i \sin \theta)^n$.