

King Fahd University of Petroleum and Minerals
MATH-302

Quiz 5

Name:-

ID:-

Sec.:01

(1) Find all values of z satisfying $\sin z = 2$.

(2) Show that $f(z) = e^{x^2-y^2} \cos 2xy + i e^{x^2-y^2} \sin 2xy$ is analytic in an appropriate domain and find the derivative of $f(z)$.

(3) Determine if the identity $\text{Ln}(-1 + i)^2 = 2\text{Ln}(-1 + i)$ is true.

MATH-302

Quiz 5

Name:-

ID:-

Sec.:05

(1) Find all values of z satisfying $\sinh z = -i$.

(2) Find the values of z where $f(z) = |z|^2 - \bar{z}$ is differentiable.

(3) Check if the identity $\text{Ln}(z_1 z_2) = \text{Ln}(z_1) + \text{Ln}(z_2)$ is true for $z_1 = i$ and $z_2 = -1 + i$.

