Quiz 10 (10mins, 20pts)

Please write down your name, SID, and solutions discernably.

Name : SID : Score :

1. (10pts) Evaluate the integral by making an appropriate change of variables.

\[ \int \int_R (x + y)e^{x^2-y^2} \, dA \]

, where \( R \) is the rectangle enclosed by the lines \( x - y = 0 \), \( x - y = 2 \), \( x + y = 0 \), and \( x + y = 3 \).
2. (10pts) Evaluate the line integral

\[ \int_C (x^2 + y^2 + z^2)ds \]

, where \( C : x = t, y = \cos 2t, z = \sin 2t, 0 \leq t \leq 2\pi. \)