Evaluate the integral $I = \int_0^1 (x^2 + 2x + 1)e^{x^2} \, dx$ (Evaluate the integral of the given functio

Tip: Consider integration by parts or substitution to simplify the integral.

Prove that for any real numbers a and b, if $a^2 + b^2 = 1$, then $|a + b| \leq \sqrt{2}$ (Show the i

Tip: Use the Cauchy-Schwarz inequality or the properties of squares to derive the result.