

Math 301-121 Quiz 2 (A)

Name:.....Sec#:.....ID#:.....Ser#:.....

Q.1: Use divergence theorem to evaluate $\int \int_S (F \cdot \hat{n}) dS$, where $\vec{F} = x^3 \hat{i} + y^3 \hat{j} + z^3 \hat{k}$ and D is the region bounded by the sphere $x^2 + y^2 + z^2 = 9$.

Q.2: Use definition to find laplace transform $\mathcal{L}\{\sin 2x\}$.

Q.3: Solve the initial value problem using Laplace transform $y'' + 5y' + 4y = 0$ with $y(0) = 1$, $y'(0) = 0$.