

Math 301-142 Quiz 1 (A)

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

Q.1: Find length of the curve defined by $\vec{r}(t) = e^t \cos 3t \hat{\mathbf{i}} + e^t \sin 3t \hat{\mathbf{j}} + e^t \hat{\mathbf{k}}$ at $0 \leq t \leq 2\pi$.

Q.2: Find the directional derivative of $f(x, y) = \frac{2xy}{3x + 4y}$ at $(-1, 2)$ in the direction of the vector $3\hat{\mathbf{i}} - 4\hat{\mathbf{j}}$