

Quiz 3 – MATH 3503 Fall 2022

Let $\vec{r}(t) = \langle e^t, t^2 - 3t + 1, \sin(3t) \rangle$.

1. Compute $\frac{d}{dt}\vec{r}(t)$.

2. Find the equation of the tangent line to the curve traced by \vec{r} at $t = 1$.

3. Compute $\int \vec{r}(t)dt$.