
q

Show all work. 5 points each.

1. Find the equation of the tangent line of $\mathbf{r}(t) = \langle 1 + 2\sqrt{t}, t^3 - t, t^3 + t \rangle$ for $t = 1$.

2. Find the equation of the tangent plane for $\mathbf{r}(t) = \langle t, t^2, t^3 \rangle$ at $t = 1$.