Math 2110Q Worksheet 6
September 18, 2019

1. Given a curve with parameterization $\vec{r}(t) = \langle \sqrt{2}\cos(t), 1+t, \sqrt{2}\sin(t) \rangle$, find the TNB-frame vectors AND the curvature at the point $(-\sqrt{2}, 1+\pi, 0)$. (6 pts.)

2. Let $\vec{a}(t) = < 4e^{2t}, 6t, 0 >$ describe the acceleration of a particle (neglecting units). Find the position of the particle at time t if the initial position is $(1, 0, 1)$ and the initial velocity is $< 2, 0, 0 >$. (4 pts.)