

NAME:

Georgia Tech, 2/3/2016
Math 2551 (Sections L1 – L3)

Quiz 3

1. Consider the curve:

$$\mathbf{r}(t) = \langle t \sin t + \cos t, -t \cos t + \sin t \rangle; \sqrt{2} \leq t \leq 2.$$

- a). (10 pts.) Find the unit tangent vector $\mathbf{T}(t)$.
- b). (5 pts.) Find the length of the curve.
- c). (5 pts.) Find the unit normal vector $\mathbf{N}(t)$.