Last Name: _____

First Name: _____

Student ID: _____

Quiz 5

Question 1. *(4 marks)* Find the limit:

$$\lim_{x \to \infty} \left\langle \frac{1+t^2}{1-t^2}, \tan^{-1} t, \frac{1-e^{-2t}}{t} \right\rangle$$

Question 2. *(6 marks)* Draw the projections of $\vec{r}(t) = \langle t, \sin t, 2\cos t \rangle$ on the three coordinate planes and use these projections to help sketch this curve.