

Name: _____

Quiz 7

Math 252

You have 20 minutes to complete this quiz and upload your work to Canvas. Write your answers on a separate sheet of paper and scan them with a scanning app. When you're finished, first check your work if there is time remaining, then turn it in. You may use a scientific calculator, but not a graphing one, and you may not consult other people or the internet. **Show all your work.**

1. (4 points) In the following integral, what should we substitute for t ? What will dt be? You don't need to evaluate the integral.

$$\int \frac{t^2}{\sqrt{t^2 + 4}} dt$$

$$t =$$

$$dt =$$

2. (8 points) Evaluate $\int \frac{x+1}{x^3+x} dx$.

3. (8 points) Evaluate $\int_0^\infty e^{-x} dx$.