

Math 2250 Week 1 Quiz

Name and Unid: _____

Write your answer in the space provided. Show work for full credit.

1. (10 points) Verify that $y(x) = e^{\gamma x}$, where $\gamma \neq 0$, is the solution to the following ODE

$$\frac{1}{\gamma^2} \frac{d^2 y}{dx^2} + \frac{1}{\gamma} \frac{dy}{dx} - 2y = 0$$

2. (10 points) Suppose a thruster fires at time $t = 0$ on a initially stationary rocket in space, and generates an acceleration $a(t) = \frac{10}{(1+t)^2}$. Find the velocity function as a function of time t .