

Name:

1. (a) Compute $W(t, e^t)$.

(b) Can $f_1(t) = t$ and $f_2(t) = e^t$ be solutions to a differential equation $y'' + p(t)y' + q(t)y = 0$ on the interval $(-1, 2)$, where p and q are continuous everywhere?

2. Solve the following initial value problem.

$$y'' + 6y' + 9y = 0$$

$$y(0) = 1$$

$$y'(0) = 2$$