

Math 421 / Quiz 2

Name:

1. Use the Laplace transform to solve the given IVP

$$\begin{cases} y'' - 8y' + 20y = te^t \\ y(0) = 0 \\ y'(0) = 0 \end{cases}$$

Useful formula:

$$\frac{1}{(s-1)^2(s^2-8s+20)} = \frac{\frac{6}{169}}{s-1} + \frac{\frac{1}{13}}{(s-1)^2} + \frac{\frac{-6}{169}s + \frac{29}{169}}{s^2-8s+20}$$