

MATH 361 Quiz 1**Name:**

Show all work. 5 points each.

1. Show $\mathcal{L}\{f'(t)\}(s) = sF(s) - f(0)$ where $F(s) = \mathcal{L}\{f(t)\}(s)$ is the Laplace transform of f .

2. Use the laplace transform and solve for $Y(s) = \mathcal{L}\{y(t)\}(s)$.

$$y'' + 2y' + y = t, y(0) = 0, y'(0) = 1$$