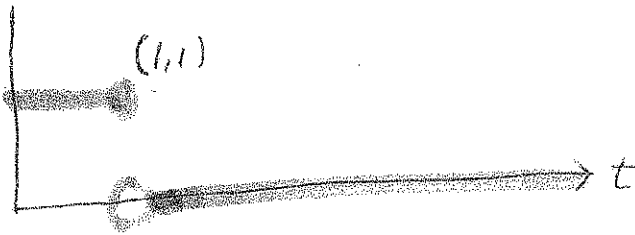


PRINT Your Name: _____

Quiz for November 15, 2012

The quiz is worth 5 points. Remove EVERYTHING from your desk except this quiz and a pen or pencil. SHOW every step. Express your work in a neat and coherent manner. BOX your answer.

Compute the Laplace transform of the function $f(t)$ which is graphed below.



$$\mathcal{L}(f(t)) = \int_0^{\infty} e^{-st} f(t) dt = \int_0^1 e^{-st} dt$$

since $f(t) = \begin{cases} 1 & \text{for } 0 \leq t \leq 1 \\ 0 & \text{for } t > 1 \end{cases}$

$$= \left[-\frac{1}{s} e^{-st} \right]_0^1 = \boxed{-\frac{1}{s} e^{-s} + \frac{1}{s}}$$