

Name: _____

Math 3336
Spring 2005
Test III

1. Find the inverse Laplace transform of

$$\frac{3s + 2}{s^2 + 4s + 6}$$

2. Solve the initial value problem

$$x'' + x = u_{\frac{\pi}{6}}(t), \quad x(0) = 1, \quad x'(0) = 0$$

(Note that $u_{\frac{\pi}{6}}(t) \equiv u\left(t - \frac{\pi}{6}\right)$)

3. Solve the initial value problem

$$x' = x + \cos t, \quad x(0) = 1$$

4. Find the Laplace transform of the function depicted in the graph

