Quiz 6 for Calc4 on Mar. 24, 2015

Name:_____RUID:_____

Email:_____

1. (5 pt) Find the general solution to

$$y'' - 6y' + 9y = \frac{e^{3t}}{1 + t^2}$$

2. (5 pt) A spring-mass system has a spring constant of 3 N/m. A mass of 2 kg is attached to the spring, and the motion takes place in a viscous fluid that offers a resistance numerically equal to the magnitude of the instantaneous velocity. If the system is driven by an external force of $(3\cos 3t - 2\sin 3t)$ N, determine the steady state response.