

Math 207 Quiz #6
May 11, 2010

Name: _____

Show all work and answers on a separate sheet with a box around your final answer. No calculators.

1. Find the solution to the IVP: $2w'' + 11w' + 5w = 0$, $w(0) = 5$, $w'(0) = -7$
2. Find the general solution to $y'' - 2y' + 10y = 0$.
3. For a mass-spring system modeled by $3y'' + 5y' + ky = 0$, what values for the spring's stiffness (k) yield solutions that are overdamped? (Overdamped Solutions: Solutions that do **not** oscillate infinitely as $t \rightarrow \infty$.)