

Math 205, Differential Equations

Quiz 7

1. A force of 2 pounds stretches a spring 1 foot. A 3.2 pound weight is attached to the spring, and the system is then immersed in a medium that imparts a damping force numerically equal to 0.4 times the instantaneous velocity. Find the equation of motion if the weight is released from rest 1 ft above the equilibrium position.

2. Solve the given differential equation:

(a) $xy'' - 3y' = 0$

(b) $x^2y'' + 5xy' + 4y = 0$