

Name : _____

242 - Differential Equations: Test 3 Extra Credit

DIRECTIONS: Show all work! There is a total of 5 points which will be added to Test 3.

1. (5 points) pg. 202 #44 - A mass spring system is driven by the external force $g(t) = 2\sin(3t) + 10\cos(3t)$. The mass equals 1, the spring constant equals 5, and the damping coefficient equals 2. If the mass is initially located at $y(0) = -1$, with initial velocity $y'(0) = 5$, find its equation of motion $y(t)$.