

Applied Mathematics I - Worksheet #13

Professor Broughton

Name: _____

Box #: _____

1. particular and homogeneous solutions

In each of the equations below find a particular solution, the general solution to the homogeneous equation and the solution of the given equation. Then sketch the graph of the particular solution and the actual solution.

1. $2y'(t) + y(t) = 1$; $t, y(0) = 4$

2. $0.1y'(t) + y(t) = 1$; $t, y(0) = 4$.

3. $y''(t) + 2y(t) = \sin(3t); y(0) = 1:$

4. $y''(t) + 0.1y(t) = \cos(4t); y(0) = 1:$