MA 2326
Assignment 3
Due 20 February 2014

Id: 2326-s2014-3.m4,v 1.2 2014/03/04 09:54:33 john Exp john

1. Solve the initial value problem

$$x' = y + z, \quad y' = x + z, \quad z' = x + y,$$

$$x(0) = x_0, \quad y(0) = y_0, \quad z(0) = z_0.$$

2. Find the solution of the initial value problem $x(0) = x_0$, $x'(0) = y_0$ for the forced harmonic oscillator in the critically damped case:

$$x''(t) + 2rx'(t) + r^2x(t) = \cos(\Omega t).$$