HOMEWORK 24
DIFFERENTIAL EQUATIONS
DUE 11-02

Show your work!

(1) Show that any function of the form $x = Ce^{-\sqrt{10}t} + Dte^{-\sqrt{10}t}$ is a solution of the differential equation $\ddot{x} + 2\sqrt{10}\dot{x} + 10x = 0$. (Note that the square root sign in the exponent is over just the 10, not the t.)

- **Four** book problems: #3.6.11, 20, 21, 28. For #3.6.21(c), just comment on whether your graphs are physically plausible.