HW15, due tomorrow:
7735 #2-6
7776 #4

Review session, Monday, May 11, 10 - 11 HERE

Final Exam, Monday, May 11, 1:30 - 4:30
Sections 21, 22 (Kirchner): 250 Anderson Hall
Section 26, 27 (Stanley): 330 Anderson Hall
other sections are in other rooms

You will be given:
- trigonometric identities
- Laplace transforms

Recent material to expect on the final exam:
- two-mass, three-spring system
- solving differential equations involving $\delta(t-c)$
- systems with a repeated eigenvalue

Example 1. (Example 4 from Mon.) Find the general solution of the system $X' = AX$, where
\[ A = \begin{pmatrix} 1 & 2 \\ 0 & 1 \end{pmatrix}. \]

Example 2. Find the least squares line to the following set of data:
(5, 29), (10, 70), (15, 92), (20, 115).

Example 3. Solve this initial value problem:
\[ y' \frac{dy}{dx} = 2x^2 + 3y^2, \]
\[ y(1) = 2. \]

Example 4. Find the general solution of the differential equation
\[ 3t^2y'' = 2ty' + 2y, \]
given that $y = t^2$ is a solution.
Example 5. Find eigenvalues and eigenfunctions for the following boundary value problem:

\[ y'' + \lambda^2 y = 0, \]
\[ y(0) = 0, \]
\[ y(10) = 0. \]