EXAM 1 IS SCHEDULED FOR WEDNESDAY, OCTOBER 10. The exam will cover all our work on series solutions of ordinary differential equations (including basic properties of p[ower series, solutions at ordinary and regular singular points, Bessel's equation, Legendre equation, etc.) and on the Laplace transform. **See the web page for more information.**

None of these problems will be collected.

Section 5.5: 1 (a)–(d), 5 (f), 7 (f)

Section 5.6: 1 (a), (c), (d), (e), (i), 2 (d), 3

5.A. Use the Laplace transform to solve the integral equation $(*)$ for $f(t)$:

$$f(t) + \int_0^t (t-\tau) f(\tau)\, d\tau = t. \qquad (*)$$