

EXAM 1 IS SCHEDULED FOR MONDAY, OCTOBER 6. The exam will cover all our work on series solutions of ordinary differential equations (including basic properties of power 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 $f(t)$:

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