

Problem 1.12

Show that a substitution identical to that used in reduction of order $y(x) = u(x)f(x)$ can be used to eliminate the $y^{(n-1)}(x)$ term from an n th-order homogeneous linear differential equation. (When the one-derivative term has been eliminated from a linear second-order differential equation, the resulting equation is a *Schrödinger* equation.)