1051-34-22   **Raegan Higgins*** (`raegan.higgins@ttu.edu`), Box 41042, Lubbock, TX 79402-1042.
Asymptotic Behavior of Second Order Nonlinear Differential Equations. Preliminary report.

Using the method of upper and lower solutions and results from calculus, we will establish necessary and sufficient conditions for the existence of certain types of solutions of

$$(p(t)y'(t))' + f(t, y(t))g(p(t)y'(t)) = 0.$$

We assume p, f, and g satisfy certain conditions. These results extend some earlier ones for the case $p(t) = 1$. (Received June 29, 2009)