ATS 621, Fall 2011

HOMEWORK #2: due Thursday, September 8, 2011

Please provide solutions with complete calculations for full credit. Use SI units.
Point values listed in brackets for each question.

Problems from Jacob:

Q1 (30): 3.4

Q2 (40): 3.5

Note: will need to solve 1st order linear differential equation of form:

$$y' + p(t)y = r(t)$$

Where the solution is of the form:

$$y(t) = e^{-h}\left[\int e^{h} r(t)dt + C\right], \quad where\ h = \int p(t)dt$$

Q3 (30): 3.7