Homework

Due Monday

1. This problem will not be collected, but you are to read §4.5 and §6.1. **The quiz on Wednesday will be based on the reading from §6.1**. Things like problems 1 and 2 on pages 340–341 are fair game. You will be expected to know the definition of *staff-hours*, *work*, productivity rate, *human effort* and the basic relation

$$\text{work done} \quad = \quad \text{productivity rate} \quad \times \quad \text{human effort}.$$

   Note that the doing the problems on accumulated work is almost exactly the same as the problems we did last term involving the jogger and truck driver.

2. Page 263 problem 1 (all five parts).

3. (a) Sketch the graph of the solution to the initial value problem

$$y' = x(x-1)(x-3)e^{-x^2}, \quad y(2) = 4$$

   showing all local maxima and minima.

   (b) Redo the first part of this question changing the initial condition to $y(2) = 1$.

   (c) If we now change the initial condition to $y(0) = -2$ how does the graph change?

4. Page 341 problem 3

5. Page 341 problem 4

6. Page 341 problem 5