Submit your solutions to the following problems in lecture on the due date above. Present your work in a clean and organized fashion, either on a printed copy of this document (preferred) or a separate sheet of paper. As stated in the syllabus, late submissions will **not** be accepted.

1. Evaluate the following indefinite integrals.

   (a) $\displaystyle\int 4(3x+2)^6 \, dx$

   (b) $\displaystyle\int 4xe^{9x^2} \, dx$

2. Solve the following initial value problem.
   $$f''(x) = 2x + 3, \quad f'(1) = 5, \quad f(0) = 3$$

3. Suppose a ball is thrown upward at 48ft/s starting from 15ft above ground. What is the largest height the ball will achieve?