Math 106 Sections A and B

HW 2 (due on Friday, 1/21)

Show all your work to receive full credit for a problem. Use the table of integrals only for problems from section 7.4.

I. Do the following problems from the textbook:
   • Section 7.1 (Pages 297-298) 50, 60, 66, 74
   • Section 7.2 (Page 304) 52
   • Section 7.4 (Page 316) 14, 20

II. Evaluate the following integrals exactly:
   (a) \( \int x^2 \ln x \, dx \)
   (b) \( \int \frac{(\ln x)^2}{x} \, dx \)
   (c) \( \int (z - 1) e^{3z} \, dz \)
   (d) \( \int t \sqrt{t + 7} \, dt \)
   (e) \( \int \frac{y - 2}{y^2 - 4y + 11} \, dy \)
   (f) \( \int x^3 e^{x^2} \, dx \)

Practice Problems: Not to be handed in
   • Section 7.1 (Page 297) 31, 35, 49, 51, 57, 65
   • Section 7.2 (Page 303) 3, 7, 9, 13, 17, 19, 21, 29, 31, 33, 37
   • Section 7.4 (Page 316) 19, 27, 29