Quiz 2
Quiz 2 for the 12noon class is on Thursday Feb 20; it covers §7.4, IQ and partial fractions.

E1 Info
Exam 1 is Thursday Feb 27 in your TA session.
Fifty minutes.
Bring your cheat sheet (one 8.5 by 11 sheet of paper)
No Calculators
Integration by parts, powers of trig, trig substitution, IQ, partial fractions, integrating factors, second order equations.

This Week
Monday: We'll finish §9.5, and start limits and indeterminate forms
Tuesday: You'll work on second order equations and limits.
Wednesday: I'll start on §7.8, improper integrals
Thursday: Everyone will take a quiz over §7.4; only the 12noon class will be graded. Then everyone will work more on limits.
Friday: I'll finish improper integrals and start sequences §11.1

Book
9.5 Page 625 7, 9, 11, 19
4.4 Page 311 13, 19, 21, 57, 61, 63
7.8 p534 5, 9, 11, 17, 49, 51

DiffEq
Solve the diffeq:

\[ a) \ y' = -3y + 2e^{-x} \]
\[ b) \ y' - xy = x \]
\[ c) \ y'' + 2y' + 3y = 0 \]
\[ d) \ y'' - 4y' + 5y = 0 \]

Old E1: Integrals

1) (20 points) \( \int \frac{\tan^2 x}{\sec x} \, dx \)
2) (35 points) \( \int \frac{x + 1}{x(x^2 + 1)} \, dx \)
3) (30 points) \( \int \frac{x^2}{\sqrt{1 + x^2}} \, dx \)
4) (15 points) \( \int \sin^{-1} x \, dx \)

1) (30) \( \int \frac{x^2 - 1}{x^2 + 2x + 2} \, dx \)
2) (30) \( \int \frac{x^2}{\sqrt{x^2 + 1}} \, dx \)
3) (15) \( \int x^2 \ln x \, dx \)
4) (25) \( \int \frac{\tan^3 x}{\sec^3 x} \, dx \)