M244
Spr 22

Take Home Quiz 1

Name:_____

Instructions: Be sure to follow the instructions carefully. You may review techniques using a calculus text, but you may not consult other students, and you may **not** use a symbolic algebra package (like Maple or Wolfram Alpha).

DUE: Monday at 11:59PM (Upload to Canvas).

1. Evaluate the following integral: $\int x\mathrm{e}^{-2x}\,dx$ (Hint: Integration by parts)
2. Exercise 18, Section 1.3: Determine all values of r so that $y = \mathrm{e}^{rt}$ is a solution to the third order differential equation $y''' - 3y'' + 2y' = 0$.
3. Use the online plotter to solve 1.1.26 and 1.1.27. Upload a screenshot of each direction field with several solutions. Also upload a description of what you see (you might put that with your solution to the first two questions).