Math 252 X01
Assignment 1

Covers: Sections 1.1, 1.2, 2.2, 2.3
Due: Thurs Jan 22 at 8:30am

INSTRUCTIONS:
This assignment will be marked for completion.
Solutions will be posted on the course website 24 hours after the deadline.
You may not copy the work of another person or AI.
Submit jpg or pdf files to the D2L Dropbox.

1. Find an implicit solution:

$$\frac{e^y dy}{dx} = \frac{2\sin 3x}{(e^y+1)^6}$$

2. Find an explicit solution:

$$\frac{dy}{dx} = \frac{xy^4}{\sqrt{1+x^2}}, \qquad y(0) = \tfrac{1}{3}$$

3. Find an explicit solution:

$$\frac{dy}{dx} + (1 + \frac{2}{x})y = 6$$

4. Find an explicit solution:

$$y' - 4xy = \frac{e^{2x^2}}{x^2-4}$$