Present neatly on separate paper. Justify for full credit. No Calculators.
Name _____Score _____ 15 minutes **Weight: 5**

1)

   Solve for the general solution of the differential equation:

$$\frac{dy}{dx} = ye^x + y$$

2)

   Describe the differential equation in as much detail as possible using a slope field.

$$\frac{dy}{dx} = \frac{1}{xy}$$

   Your slope field window should have dimensions [-3, 3] by [-3, 3]. Include the graph of a typical solution with an initial condition of your choice.