## Problem 3

For Problems 1-4 determine the order of the differential equation.

$$
y^{\prime \prime}+x y^{\prime}+e^{x} y=y^{\prime \prime \prime} .
$$

## Solution

The order of this ODE is 3 because the highest derivative in the equation is the third derivative.

$$
y^{\prime \prime}+x y^{\prime}+e^{x} y=y^{\prime \prime \prime}
$$

