APPM 1360
Spring 2022
Quiz 5
03/01/2022
Time Limit: 10 Minutes

Name: _____

Recitation Section: _____

1. (10 points) The following questions are unrelated.

   (a) Find the solution to the differential equation

   $$\frac{\mathrm{d}y}{\mathrm{d}x} = xe^{x^2 - y}$$

   that satisfies the initial condition $y(1) = \ln 2$.

   (b) Is the following sequence convergent or divergent? (Justify your answer)

   $$a_n = \frac{(n-2)!}{n!}$$