QUIZ 10 - MATH 112   Friday, December 11

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Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Evaluate the improper integral $\int_{e}^{+\infty} (\ln x)^{-2} \frac{1}{x} dx$.

2. Solve the initial value problem (i.e., find the particular solution of the following differential equation plus initial condition)

$$y' = y^2 e^x + y^2, \quad y(0) = 1.$$