Name [**1 Pt**]:————————————————— Quiz Score:————/(4+1)

Answer all questions. Show all work, and carefully explain your reasoning.

$\boxed{2}$ 1. Given the differential form: $[\ln(\frac{1}{x}) + x)]dy + [\frac{cy}{x} + y + 2x]dx = 0$,
find the constant c, such that this equation is exact

Solution:

$\boxed{2}$ 2. Using the c determined above, solve this equation, when $y(1) = 1$. **LEAVE YOUR
ANSWER AS AN IMPLICIT FUNCTION OF y**

Solution: