

Math 225 – Quiz #2: Exact Equations

Clearly and neatly show all work for each problem. Solutions with no work will receive no credit. Implicit solutions are acceptable.

*Note: your solution for (2) should contain a non-elementary integral.*

$$(1) \quad (2xy^2 - 3)dx + (2x^2y + 4)dy = 0$$

$$(2) \quad \left(1 + \ln x - \frac{y}{x}\right)dx + (1 - \ln x)dy = 0$$

$$(3) \quad (y^2 - 4)dx = (y + xy)dy, \quad y(0) = 1$$