

Problem 2

Determine whether each of the equations in Problems 1 through 12 is exact. If it is exact, find the solution.

$$(2x + 4y) + (2x - 2y)y' = 0$$

Solution

The ODE is not exact because

$$\frac{\partial}{\partial y}(2x + 4y) = 4 \neq \frac{\partial}{\partial x}(2x - 2y) = 2.$$