

Exact Differential Equation Questions.

Q1: Solve the following differential equation.

$$2xy - 9x^2 + (2y + x^2 + 1) \frac{dy}{dx} = 0$$

Q2: Solve the following IVP and find the interval of validity for

$$2xy - 9x^2 + (2y + x^2 + 1) \frac{dy}{dx} = 0, y(0) = -3$$