



5th Quiz

Student Name in Arabic:

B.N^o Section:

1- Solve the following differential equation

$$\frac{dy}{dx} = \frac{xy}{x^2 + y^2}$$

$$\frac{dy}{dt} = 1 + t^2 + y^2 + t^2 y^2$$

$$\frac{dy}{dx} = \frac{2x + 3y + 7}{4x + 6y + 28}$$

2- Find the first and second derivatives for the function

$$x \cos(xy) + e^{xy} = 0$$

3- Find all relative extrema and saddle points for

$$f(x, y) = 3x^2 + y^2 + 9x - 4y + 6$$