

Q1- Solve implicitly the DE:

$$x \frac{dy}{dx} = x \csc\left(-\frac{y}{x}\right) + y.$$

Hint: Check if this DE is homogenous.

Q2- Solve explicitly the DE:

$$x \frac{dy}{dx} + 2y = x^3 y^2.$$

Hint: Check if this DE is of Bernoulli type.