Exercise 1 (5 points)
Solve the differential equation \((xy^2 - x)dx - (x^2y + y)dy = 0\) and find all singular solutions if any.

Exercise 2 (5 points)
Solve the differential equation \(xy' - 2y = x^4\cos(x)\) (show all your steps)
Exercise 1 (5 points)
Solve the differential equation \((xy^2 - 4x)dx - (x^2y + y)dy = 0\) and find all singular solutions if any.

Exercise 2 (5 points)
Solve the differential equation \(xy' - 2y = x^4e^x\) \(\text{(show all your steps)}\)