1. Find the general solutions of the following differential equations.

(a) \[ \frac{dy}{dx} = \frac{3x^2}{5y^4} \]

(b) \[ \frac{dy}{dx} = \frac{y^2}{x} \]
2. Find the solution that satisfies the given initial condition.

(a) \( \frac{dy}{dx} = 2y, \quad y(0) = 4. \)

(b) \( \frac{dy}{dx} = x \cos^2 y, \quad y(1) = 0. \)