

Each group only needs to submit ONE file containing your solutions!

Problem 1. Find the general solution to the second order ODE

$$x'' = \sqrt{e^t x'}$$

Problem 2. Solve the initial value problem

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

You may leave the final answer as an implicit function.