Math 2306 Practice - Section 4

Names:

(1) Solve the first order linear IVP and determine the largest interval over which the solution is valid.

\[
\frac{dy}{dx} - \frac{4}{x} y = -x^3, \quad y(1) = 1
\]

(2) Solve the first order IVP and determine the largest interval over which the solution is valid.

\[
\frac{dy}{dx} + 4 \frac{y}{x} = x^3 y^2, \quad y(1) = 1
\]