2.2

#1) \( y' = \frac{x^2}{y} \)

\[ \frac{dy}{dx} = \frac{x^2}{y} \]

\[ y' \, dy = x^2 \, dx \]

\[ \frac{1}{2} y^2 = \frac{1}{3} x^3 + C \]

\[ y^2 = \frac{2}{3} x^3 + C \]

or

\[ 3y^2 = 2x^3 + C \]

or

\[ 2x^3 - 3y^2 = C \]