

Differential Equations

Solve the following differential equations.

1. $\frac{dy}{dt} = t \cdot y^2$

2. $\frac{dy}{dt} = t^2 e^{-y}$

3. $\frac{dy}{dt} = \frac{1+y}{t^2}$

$$4. \quad \frac{dy}{dx} = \frac{\sec(y)}{x}$$