

Notes

Examples

Example 1. Find a general solution to the differential equation

$$\frac{dy}{dx} + \frac{5}{x} = -2x + 5.$$

Example 2. Find the particular solution to the following initial value problem.

$$t^2 y' + ty = 6, \quad y(1) = 4$$

Example 3. Find a general solution to the differential equation

$$y' - y = 19.$$

Example 4. For $-\frac{\pi}{2} < x < 0$, find a general solution to the differential equation

$$y' + y \cot x = 7 \csc x.$$