

Homework 12.5: Systems of D.E.

MAP 2302 Differential Equations

Solve the following Systems of Differential Equations. Here x, y are functions of t , i.e., $x = x(t), y = y(t)$, and $x' = \frac{dx}{dt}$ and $y' = \frac{dy}{dt}$.

1. Solve $x' = 4x(t) + 7y; y' = x - 2y$
2. Solve $x' = 4y + 1; y' = 2 - x$
3. Solve $x' = 6x + y; y' = 4x + 3y$ with $x(0) = 2, y(0) = 7$
4. Solve $x' = 3x - 3y; y' = 6x - 3y$ with $x(0) = 4, y(0) = 3$.