

Problems for Tutorial-IV: Ordinary Differential equations

1. Find the solution of the differential equation at time $t = 10$

$$\dot{x}_1 = -x_1 + 3x_2 + 2$$

$$\dot{x}_2 = -2x_2 + 1$$

Consider the initial condition be $(0.1, 0.2)$ at $t = 0$.

2. Plot the solution of the above differential (x_1, x_2) for $t \in [0.2, 10]$.