

Problem Set 2

Friday, September 14, 2018 10:26 AM

Problem 1 (5 points): Solve

$$x_1' = 3x_1 + 2x_2$$

$$x_2' = 2x_1 + 3x_2$$

$$x_1(0) = 1$$

$$x_2(0) = -2$$

Problem 2 (5 points): Solve

$$x_1' = 2x_1 - x_2$$

$$x_2' = x_1$$

$$x_1(0) = 1$$

$$x_2(0) = 0$$

Problem 3 (5 points): Solve

$$x_1' = -x_1 - 4x_2$$

$$x_2' = x_1 - x_2$$

$$x_1(0) = 0$$

$$x_2(0) = 1$$