
2022 Differential Equation Quiz 1

1. Direction fields

Draw the direction field for the following differential equation and write the Equilibrium solution.

part I : 15 points for each problem

$$(1) \quad y' = 4y - 3 \quad (2) \quad y' = -1 - 2y$$

part II : 20 points for each problem

$$(1) \quad y' = y(4 - y) \quad (2) \quad y' = y(y - 2)^2$$

part III : 30 points for each problem

$$(1) \quad y' = -2 + t - y$$