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MATH 3306

Quiz 7.1

- (1) Convert the following higher order equation into a non-autonomous system of first order equations with initial conditions

$$y'' - 3e^t y' - 2y = \sin(t), \quad y(0) = 2, \quad y'(0) = 3.$$

- (2) Convert the following higher order equation into an autonomous system of first order equations with initial conditions centered at zero.

$$y'' + 3y' - 2y = \cos(t), \quad y(2) = 3, \quad y'(2) = -1.$$