

学籍番号

氏名

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演習 3.1 次の微分方程式を [ ] 内の初期条件のもとで解け.

(1)  $y' + y = e^{-t}$       [  $y(0) = 0$  ]

(2)  $y'' - 4y = \sin t$       [  $y(0) = 0, y'(0) = 1$  ]

(3)  $y' - 2y = e^t$       [  $y(0) = 1$  ]

(4)  $y'' - 4y' + 3y = 0$       [  $y(0) = 1, y'(0) = 3$  ]

$$(5) \quad y'' - 4y' + 4y = 6e^{2t} \quad [ y(0) = 0, \quad y'(0) = 3 ]$$

$$(6) \quad y'' + 2y' - 3y = 0 \quad [ y(0) = 1, \quad y'(0) = 2 ]$$

$$(7) \quad y'' - y' - 6y = e^t \quad [ y(0) = y'(0) = 0 ]$$

$$(8) \quad y'' + 4y' + 3y = e^{-2t} \quad [ y(0) = 1, \quad y'(0) = -2 ]$$

$$(9) \quad y'' + y = 2 \sin t \quad [ y(0) = y'(0) = 0 ]$$