

問題 1

以下の微分方程式を、与えられた初期条件のもとに解け。

$$(1-1) \quad y' = 3y \quad (x, y) = (0, 2)$$

$$(1-2) \quad y' = x(1 - y) \quad (x, y) = (0, 0)$$

$$(1-3) \quad y' = y^2 x^3 \quad (x, y) = (0, 1)$$

$$(1-4) \quad yy' = x \quad (x, y) = (1, 0)$$

$$(1-5) \quad y' + y \tan x = 0 \quad (x, y) = (0, 1)$$

$$(1-6) \quad y' = \frac{x - y}{x + y} \quad (x, y) = (0, 0)$$

$$(1-7) \quad y' = \frac{2xy}{x^2 - y^2} \quad (x, y) = (0, 1)$$

$$(1-8) \quad y' - y = x \quad (x, y) = (0, 0)$$

$$(1-9) \quad y' - 2y = e^x \quad (x, y) = (0, 0)$$

$$(1-10) \quad y' + xy = x^3 \quad (x, y) = (0, 0)$$

$$(1-11) \quad y' + y \cos x = \sin 2x \quad (x, y) = (0, 0)$$