

1 次の関数に最大値, 最小値があれば, それを求めよ。

(1) $y = -2x^2 - 4x + 1 \quad (-2 \leq x < 1)$

(2) $y = x^2 + 3x + 3 \quad (0 < x \leq 2)$

(3) $y = 3(x+1)(x-2) \quad (0 \leq x < 3)$

(4) $y = x^2 - 2x + 2 \quad (-1 < x < 2)$

(5) $y = -x^2 \quad (-2 \leq x \leq 3)$

(6) $y = x^2 + 4x \quad (-1 \leq x \leq 1)$

(7) $y = x^2 + 2x - 3 \quad (-3 \leq x \leq 1)$

(8) $y = -\frac{1}{2}x^2 + 2x - 1 \quad (-2 \leq x \leq 6)$

2 次の関数に最大値, 最小値があれば, それを求めよ。

(1) $y = x^2 + 1 \quad (-1 \leq x \leq 3)$

(2) $y = -x^2 + 4x - 2 \quad (0 \leq x \leq 4)$

(3) $y = 2x^2 + 4x - 1 \quad (0 \leq x \leq 1)$

(4) $y = -3x^2 + 6x - 5 \quad (-1 \leq x \leq 2)$

(5) $y = x^2 - 3x + 1 \quad (1 < x \leq 3)$

(6) $y = -2x^2 + 9x \quad (0 < x < 3)$

3 次の関数に最大値, 最小値があれば, それを求めよ。

(1) $y = 3x^2 \quad (1 \leq x \leq 3)$

(2) $y = -\frac{1}{2}x^2 \quad (-2 \leq x \leq 1)$

(3) $y = x^2 - 2x - 3 \quad (-2 \leq x \leq 5)$

(4) $y = -2x^2 - 4x + 1 \quad (-1 \leq x \leq 1)$

(5) $y = 2x^2 - 3x + 4 \quad (-1 \leq x \leq 2)$

(6) $y = -\frac{1}{2}x^2 + 2x \quad (3 \leq x \leq 6)$

(7) $y = 2(x+1)(x-4) \quad (-1 \leq x \leq 4)$

(8) $y = -2x^2 + x \quad (x \geq -1)$

(9) $y = \frac{1}{3}x^2 + 2x + 2 \quad (-2 \leq x < -1)$