

1 次の関数のグラフを描け.

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

(4) $y = 2x^2 - 4x + 1$ (5) $y = -3x^2 - 12x + 2$ (6) $y = 4x^2 + 5x - 2$

(7) $y = -2x^2 + 5x + 4$ (8) $y = \frac{1}{2}x^2 + x + 1$ (9) $y = \frac{3}{2}x^2 + \frac{5}{4}x - 2$

(10) $y = -\frac{2}{3}x^2 + \frac{4}{7}x + 3$

2 次の関数について、指定された定義域における y の最大値と最小値を求めよ. また、そのときの x の値も求めよ.

(1) $y = x^2 - 4x + 5$ ($0 \leq x \leq 5$) (2) $y = x^2 + 6x - 3$ ($-5 \leq x \leq -1$)

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

(5) $y = -3x^2 - 12x + 2$ ($0 \leq x \leq 2$) (6) $y = 4x^2 + 5x - 2$ ($-3 \leq x \leq -1$)

(7) $y = -2x^2 + 5x + 4$ ($-2 \leq x \leq 3$) (8) $y = \frac{1}{2}x^2 + x + 1$ ($0 \leq x \leq 1$)

(9) $y = \frac{3}{2}x^2 + \frac{5}{4}x - 2$ ($-\frac{5}{3} \leq x \leq \frac{7}{3}$)

(10) $y = -\frac{2}{3}x^2 + \frac{4}{7}x + 3$ ($-\frac{13}{7} \leq x \leq \frac{15}{7}$)