

問題

問題 1. 次の計算をなさい。

(1) $(x + 3)(x - 5) + (x + 1)(x + 7)$

(2) $(x - 4)(x + 4) + (x - 2)^2$

(3) $(2x + 1)^2 + (2x - 3)(x + 8)$

(4) $x(x + 5) + (x - 6)(x - 7)$

(5) $(x + 2)(x - 6) - (x - 2)(x - 5)$

(6) $(2x - 1)^2 - (x - 2)(3x + 1)$

(7) $(x + 1)^2 - (2x - 3)(2x + 3)$

(8) $(x + 7)(x - 3) - x(x + 7)$

問題 2. 次の計算をなさい。

(1) $(x + y + 4)(x + y - 4)$

(2) $(a + b + 5)(a + b - 5)$

(3) $(a + b + 1)(a + b + 3)$

(4) $(x + y + 2)(x + y - 5)$

(5) $(a + 2b - 2)(a + 2b + 4)$

(6) $(4x - y + 2)(4x - y - 2)$

(7) $(x - y)(x - y + 4)$

(8) $(3a + b)(3a + b - 2)$

(9) $(x - y + 2)^2$

(10) $(a + b + 3)^2$

(11) $(a - b - 1)^2$

(12) $(x + y - 4)^2$

練習

練習 1. 次の計算をなさい。

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

(2) $(x + 6)(x - 1) + (x + 1)(x - 1)$

(3) $x(x - 5) + (x + 4)(x - 4)$

(4) $(x - 2)^2 + 2x(x + 8)$

(5) $(x + 2)(x + 3) - (x - 2)(x - 3)$

(6) $(3x - 2)(3x + 2) - 9x(x + 2)$

(7) $(2x - 1)^2 - (2x - 1)(3x + 1)$

(8) $(x + 8)(x - 2) - x(x - 6)$

練習 2. 次の計算をなさい。

(1) $(x + y + 2)(x + y - 2)$

(2) $(a + b + 6)(a + b - 6)$

(3) $(a + b - 2)(a + b + 6)$

(4) $(x + y - 3)(x + y - 4)$

(5) $(3a - b - 1)(3a - b + 1)$

(6) $(x + 2y + 3)(x + 2y - 1)$

(7) $(x + y)(x + y - 1)$

(8) $(a - 2b)(a - 2b + 5)$

(9) $(x + y + 3)^2$

(10) $(a - b - 1)^2$

(11) $(a + b + 4)^2$

(12) $(x - y - 2)^2$

解答

問題 1.

- (1) $2x^2 + 6x - 8$ (2) $2x^2 - 4x - 12$ (3) $6x^2 + 17x - 23$ (4) $2x^2 - 8x + 42$
(5) $3x - 22$ (6) $x^2 + x + 3$ (7) $-3x^2 + 2x + 10$ (8) $-3x - 21$

問題 2.

- (1) $x^2 + 2xy + y^2 - 16$ (2) $a^2 + 2ab + b^2 - 25$ (3) $a^2 + 2ab + b^2 + 4a + 4b + 3$
(4) $x^2 + 2xy + y^2 - 3x - 3y - 10$ (5) $a^2 + 4ab + 4b^2 + 2a + 4b - 8$ (6) $16x^2 - 8xy + y^2 - 4$
(7) $x^2 - 2xy + y^2 + 4x - 4y$ (8) $9a^2 + 6ab + b^2 - 6a - 2b$ (9) $x^2 + y^2 + 4 - 2xy - 4y + 4x$
(10) $a^2 + b^2 + 9 + 2ab + 6b + 6a$ (11) $a^2 + b^2 + 1 - 2ab + 2b - 2a$
(12) $x^2 + y^2 + 16 + 2xy - 8y - 8x$

練習 1.

- (1) $2x^2 - 4x - 15$ (2) $2x^2 + 5x - 7$ (3) $2x^2 - 5x - 16$ (4) $3x^2 + 12x + 4$
(5) $10x$ (6) $-18x - 4$ (7) $-2x^2 - 3x + 2$ (8) $12x - 16$

練習 2.

- (1) $x^2 + 2xy + y^2 - 4$ (2) $a^2 + 2ab + b^2 - 36$ (3) $a^2 + 2ab + b^2 + 4a + 4b - 12$
(4) $x^2 + 2xy + y^2 - 7x - 7y + 12$ (5) $9a^2 - 6ab + b^2 - 1$ (6) $x^2 + 4xy + 4y^2 + 2x + 4y - 3$
(7) $x^2 + 2xy + y^2 - x - y$ (8) $a^2 - 4ab + 4b^2 + 5a - 10b$ (9) $x^2 + y^2 + 9 + 2xy + 6y + 6x$
(10) $a^2 + b^2 + 1 - 2ab + 2b - 2a$ (11) $a^2 + b^2 + 16 + 2ab + 8b + 8a$
(12) $x^2 + y^2 + 4 - 2xy + 4y - 4x$