

式の計算 [多項式の加法と減法]

<演習問題>

次の計算をせよ。

(1) $(2a + 3b) + (4a + 5b)$

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

(3) $(2a + 3b) + (5a - 2b)$

(4) $(5a - 9b) + (5a - b)$

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

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

(7) $(a + 3b) - (5a + 6b)$

(8) $(10a + 2b) - (a + 7b)$

(9) $(4a - 2b) - (2a - 3b)$

(10) $(8a - 2b) - (-a - 5b)$

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

(12) $(a + 4b) - (-a - 4b)$

(13) $(2a + b) + (3a + 4)$

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

(15) $(3x^2 + 2x + 6) + (5x^2 - 1)$

(16) $(x^2 + 4x + 1) - (5x^2 - x)$

(17) $(5x^2 - x - 1) + (-x^2 + 2)$

(18) $(2x^2 - x + 7) - (-x^2 + 2)$

(19) $(2x^2 - 5x + 4) - (3x^2 - 5x)$

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次の計算をせよ。

$$(1) \quad (2a + 3b) + (4a + 5b)$$

$$(2a + 3b) + (4a + 5b) = 2a + 4a + 3b + 5b \\ = 6a + 8b$$

$$(2) \quad (a - 2b) + (-4a + b)$$

$$(a - 2b) + (-4a + b) = a - 4a - 2b + b \\ = -3a - b$$

$$(3) \quad (2a + 3b) + (5a - 2b)$$

$$(2a + 3b) + (5a - 2b) = 2a + 5a + 3b - 2b \\ = 7a + b$$

$$(4) \quad (5a - 9b) + (5a - b)$$

$$(5a - 9b) + (5a - b) = 5a + 5a - 9b - b \\ = 10a - 10b$$

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

$$(2a + 4b) + (-4a + 4b) = 2a - 4a + 4b + 4b \\ = -2a + 8b$$

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

$$(3a + 2b) - (a + b) = 3a - a + 2b - b \\ = 2a + b$$

$$(7) \quad (a + 3b) - (5a + 6b)$$

$$(a + 3b) - (5a + 6b) = a - 5a + 3b - 6b \\ = -4a - 3b$$

$$(8) \quad (10a + 2b) - (a + 7b)$$

$$(10a + 2b) - (a + 7b) = 10a - a + 2b - 7b \\ = 9a - 5b$$

$$(9) \quad (4a - 2b) - (2a - 3b)$$

$$(4a - 2b) - (2a - 3b) = 4a - 2a - 2b + 3b \\ = 2a + b$$

$$(10) \quad (8a - 2b) - (-a - 5b)$$

$$(8a - 2b) - (-a - 5b) = 8a + a - 2b + 5b \\ = 9a + 3b$$

$$(11) \quad (2a + 4b) - (-4a + 4b)$$

$$(2a + 4b) - (-4a + 4b) = 2a + 4a + 4b - 4b \\ = 6a$$

$$(12) \quad (a + 4b) - (-a - 4b)$$

$$(a + 4b) - (-a - 4b) = a + a + 4b + 4b \\ = 2a + 8b$$

$$(13) \quad (2a + b) + (3a + 4)$$

$$(2a + b) + (3a + 4) = 2a + 3a + b + 4 \\ = 5a + b + 4$$

$$(14) \quad (a + b + 4) - (2a + 5)$$

$$(a + b + 4) - (2a + 5) = a - 2a + b + 4 - 5 \\ = -a + b - 1$$

$$(15) \quad (3x^2 + 2x + 6) + (5x^2 - 1)$$

$$(3x^2 + 2x + 6) + (5x^2 - 1) = 3x^2 + 5x^2 + 2x + 6 - 1 \\ = 8x^2 + 2x + 5$$

$$(16) \quad (x^2 + 4x + 1) - (5x^2 - x)$$

$$(x^2 + 4x + 1) - (5x^2 - x) = x^2 - 5x^2 + 4x + x + 1 \\ = -4x^2 + 5x + 1$$

$$(17) \quad (5x^2 - x - 1) + (-x^2 + 2)$$

$$(5x^2 - x - 1) + (-x^2 + 2) = 5x^2 - x^2 - x - 1 + 2 \\ = 4x^2 - x + 1$$

$$(18) \quad (2x^2 - x + 7) - (-x^2 + 2)$$

$$(2x^2 - x + 7) - (-x^2 + 2) = 2x^2 + x^2 - x + 7 - 2 \\ = 3x^2 - x + 5$$

$$(19) \quad (2x^2 - 5x + 4) - (3x^2 - 5x)$$

$$(2x^2 - 5x + 4) - (3x^2 - 5x) = 2x^2 - 3x^2 - 5x + 5x + 4 \\ = -x^2 + 4$$