

因数分解せよ.

$$(1) \quad x^3 + 8 \\ (x + 2)(x^2 - 2x + 4)$$

$$(2) \quad 27a^3 - 125b^3 \\ (3a - 5b)(9a^2 + 15ab + 25b^2)$$

$$(3) \quad x^3 - 6x^2 + 12x - 8 \\ (x - 2)^3$$

$$(4) \quad 2ab + 6 + 4b + 3a \\ (a + 2)(2b + 3)$$

$$(5) \quad x^4 + 13x^2 + 42 \\ (x^2 + 6)(x^2 + 7)$$

$$(6) \quad (x^2 + 3)^2 - 11(x^2 + 3) + 30 \\ (x^2 - 3)(x^2 - 2)$$

$$(7) \quad (2x^2 - 1)^3 + (x - 1)^3 \\ (xy - x + 2y)(4xy + 4x - 2y)$$

$$(8) \quad 15x^2y + 10x^2 + 16xy - 26x - 15y + 12 \\ (5x - 3)(3xy + 2x + 5y - 4)$$

$$(9) \quad 12x^2a^2 - x^2a - 6x^2 - 4xa^2 + 20xa - 16a^2 \\ (3ax + 2x - 4a)(4ax - 3x + 4a)$$

$$(10) \quad -9x^2y^2 - 18x^2y - 5x^2 + 15xy^2 + 17xy - 16x - 6y^2 - 4y + 16 \\ (3xy + 5x - 2y - 4)(3y - 3xy - x - 4)$$

$$(11) \quad 25a^3b + 20a^2b^2 - 20a^2b - 11ab^2 - 4b^2 \\ (5ab - 4b)(5a^2 + 4ab + b)$$

$$(12) \quad 6x^3y + 12x^3 + 10x^2y^2 + 20x^2y - 15x^2 + 4xy^2 - 17xy - 10y \\ (3x^2 + 5xy + 2y)(2xy + 4x - 5)$$