

因数分解 いろいろな計算 1

NO. 2

名前	
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✓10 点

◆ 次の式を因数分解しなさい。

(1) $9x^2 + 12x + 4$

(2) $16x^2 - 40xy + 25y^2$

(3) $8x^2 - 200$

(4) $x - x^3$

(5) $2x^2 + 24x + 64$

(6) $5x^2 + 45x + 90$

(7) $4x^2 - 20x + 24$

(8) $-3x^2 - 6x + 72$

(9) $a^2x - 16ax + 55x$

(10) $5x^3y + 30x^2y - 200xy$

解答

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

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

$$\begin{aligned}
 (3) \quad & 8(x^2 - 25) \\
 = & 8(x + 5)(x - 5)
 \end{aligned}$$

$$\begin{aligned}
 (4) \quad & x(1 - x^2) \\
 = & x(1 + x)(1 - x)
 \end{aligned}$$

$$\begin{aligned}
 (5) \quad & 2(x^2 + 12x + 32) \\
 = & 2(x + 4)(x + 8)
 \end{aligned}$$

$$\begin{aligned}
 (6) \quad & 5(x^2 + 9x + 18) \\
 = & 5(x + 3)(x + 6)
 \end{aligned}$$

$$\begin{aligned}
 (7) \quad & 4(x^2 - 5x + 6) \\
 = & 4(x - 2)(x - 3)
 \end{aligned}$$

$$\begin{aligned}
 (8) \quad & -3(x^2 + 2x - 24) \\
 = & -3(x + 6)(x - 4)
 \end{aligned}$$

$$\begin{aligned}
 (9) \quad & x(a^2 - 16a + 55) \\
 = & x(a - 5)(a - 11)
 \end{aligned}$$

$$\begin{aligned}
 (10) \quad & 5xy(x^2 + 6x - 40) \\
 = & 5xy(x - 4)(x + 10)
 \end{aligned}$$