

1.

다음 식을 간단히 하시오.

(1) $a^3 \times a^2$ (2) $x \times x^2 \times x^4$

(3) $(a^4)^3$ (4) $(x^2)^3 \times x^3$

2.

다음 식을 간단히 하시오.

(1) $a^3 \div a^5$ (2) $(x^2)^3 \div x^4$

(3) $(a^3b^2)^3$ (4) $\left(\frac{x^3}{y^2}\right)^2$

3.

다음을 계산하시오.

(1) $(2a^2b)^2 \times (-3a) \div 3a^3b$

(2) $(x^2y^2)^3 \times (-x)^2 \div x^3y^2$

4.

다음을 계산하시오.

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

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

5.

다음 식을 전개하시오.

(1) $2x(x-3y+4)$

(2) $(2x-y) \times (-3x)$

6.

다음을 계산하시오.

(1) $(6x^2-8x) \div (-2x)$

(2) $(x^2+2xy) \div \frac{1}{3}x$

정답 및 해설

1.

$$(1) a^5 \quad (2) x^7 \quad (3) a^{12} \quad (4) x^9$$

2.

$$(1) \frac{1}{a^2} \quad (2) x^2$$

$$(3) a^9 b^6 \quad (4) \frac{x^6}{y^4}$$

3.

$$\begin{aligned} (1) & (2a^2b)^2 \times (-3a) \div 3a^3b \\ &= 4a^4b^2 \times (-3a) \times \frac{1}{3a^3b} \\ &= -12a^5b^2 \times \frac{1}{3a^3b} = -4a^2b \\ (2) & (x^2y^2)^3 \times (-x)^2 \div x^3y^2 \\ &= x^6y^6 \times x^2 \div x^3y^2 \\ &= \frac{x^8y^6}{x^3y^2} = x^5y^4 \end{aligned}$$

4.

$$\begin{aligned} (1) & (4a-b) - (3a+2b) \\ &= 4a-3a-b-2b \\ &= a-3b \\ (2) & (3x^2-2x+1) - (x^2+2x-3) \\ &= 3x^2-2x+1-x^2-2x+3 \\ &= 3x^2-x^2-2x-2x+1+3 \\ &= 2x^2-4x+4 \end{aligned}$$

5.

$$\begin{aligned} (1) & 2x(x-3y+4) = 2x^2-6xy+8x \\ (2) & (2x-y) \times (-3x) = -6x^2+3xy \end{aligned}$$

6.

$$\begin{aligned} (1) & (6x^2-8x) \div (-2x) = -3x+4 \\ (2) & (x^2+2xy) \div \frac{1}{3}x = (x^2+2xy) \times \frac{3}{x} \\ &= 3x+6y \end{aligned}$$