

§ 1.2 冪と指数法則

問題 1.2

$$(1) \quad 3ab^2(2a^2b)^3 = 3ab^2 \cdot 2^3(a^2)^3b^3 = 3ab^2 \cdot 8a^6b^3 = 24a^{1+6}b^{2+3} = 24a^7b^5 .$$

$$(2) \quad \frac{4y^7}{3x^4} \left(\frac{x^2}{2y} \right)^3 = \frac{4y^7}{3x^4} \frac{(x^2)^3}{(2y)^3} = \frac{4y^7}{3x^4} \frac{x^6}{8y^3} = \frac{1}{6} x^{6-4} y^{7-3} = \frac{x^2 y^4}{6} .$$

$$(3) \quad \frac{(3c^2d)^3}{6c^4d} = \frac{3^3(c^2)^3d^3}{6c^4d} = \frac{3^3c^6d^3}{6c^4d} = \frac{9c^2d^2}{2} .$$