

問題番号 09M01_K1L3_02 レベル ☆☆☆	うんな進学塾 中3 第1章 多項式の計算 ①～③ 練習問題 Level-3-2 解答	うんな進学塾HP 
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1. 次の計算をなさい。

$$(1) \frac{2ab^2}{5a^2b^3} \times (-ab^2)^4 = \frac{2ab^2}{5a^2b^3} \times a^4b^8 = \frac{2a^5b^{10}}{5a^2b^3} = \frac{2a^3b^7}{5}$$

$$(2) \frac{7}{3}a^2b \div \left(-\frac{1}{6}ab^3\right) \times (-3b^2) = \frac{7a^2b}{3} \times \frac{6}{ab^3} \times (-3b^2) = \frac{42a}{1} \times (-1) = -42a$$

$$(3) \left(-\frac{x}{y^2}\right)^3 \div \left(-\frac{x^2}{3y}\right)^2 \div \left(\frac{3y^2}{x}\right)^2 = \frac{-x^3}{y^6} \div \frac{x^4}{9y^2} \div \frac{9y^4}{x^2} = \frac{-x^3}{y^6} \times \frac{9y^2}{x^4} \times \frac{x^2}{9y^4} = \frac{-x}{y^8}$$

$$(4) \left(\frac{3}{5}x^2y\right)^2 \times \frac{25}{4x^3y^2} \div \left(-\frac{x}{y^2}\right)^3 = \frac{9x^4y^2}{25} \times \frac{25}{4x^3y^2} \times \frac{-y^6}{x^3} = \frac{-9y^6}{4x^2}$$

$$(5) \frac{108x^2y^3}{(-3xy)^3} \times \left(-\frac{1}{2}x^3y^2\right)^2 = \frac{108x^2y^3}{-27x^3y^3} \times \frac{1}{4}x^6y^4 = \frac{-4y^0}{x} \times \frac{x^6y^4}{4} = -x^5y^4$$

$$(6) (-2a^2b)^3 \times \left(-\frac{b}{4a}\right)^4 \div \left(-\frac{5}{6}ab^2\right)^2 = -8a^6b^3 \times \frac{b^4}{256a^4} \times \frac{36}{25a^2b^4} = \frac{-8a^6b^3 \times b^4 \times 36}{256a^4 \times 25a^2b^4} \\ = \frac{-288b^3}{6400} = \frac{-9b^3}{200}$$

(1) $\frac{2a^3b^7}{5}$	(2) $-42a$	(3) $\frac{-x}{y^8}$
(4) $\frac{-9y^6}{4x^2}$	(5) $-x^5y^4$	(6) $\frac{-9b^3}{200}$