問題番号 09M01_K1L3_01 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-3-1 解答	うんな進学塾HP

1. 次の計算をしなさい。

(1) $\dfrac{5a^2b^3}{10a^3b} \times (3a^2b^2)^2 = \dfrac{5a^2b^3 \cdot 9a^4b^4}{10a^3b} = \dfrac{45a^6b^7}{10a^3b} = \dfrac{9a^3b^6}{2}$

(2) $\left(-\dfrac{9}{2}ab^2\right) \div \left(\dfrac{3}{4}a^2b\right) \times 4b = \left(-\dfrac{9}{2}ab^2 \times \dfrac{4}{3a^2b}\right) \times 4b = \left(-\dfrac{36b}{6a}\right) \times 4b = \dfrac{-24b^2}{a}$

(3) $\left(-\dfrac{x^2}{y}\right)^3 \div \left(-\dfrac{x}{2y^2}\right)^2 \div \left(\dfrac{2y}{x}\right)^3 = \dfrac{-x^6}{y^3} \div \dfrac{x^2}{4y^4} \div \dfrac{8y^3}{x^3} = \dfrac{-x^6}{y^3} \times \dfrac{4y^4}{x^2} \times \dfrac{x^3}{8y^3} = \dfrac{-4x^7y}{8y^6} = \dfrac{-x^7}{2y^2}$

(4) $\left(\dfrac{5}{2}xy^2\right)^2 \times \dfrac{16}{9x^4y^3} \div \left(-\dfrac{2y}{x}\right)^3 = \dfrac{25x^2y^4}{4} \times \dfrac{16}{9x^4y^3} \times \dfrac{-x^3}{8y^3} = \dfrac{-100x^5y}{288y^6} = \dfrac{-25x}{18y^2}$

(5) $\dfrac{200x^2y^4}{(-5xy)^3} \times \left(-\dfrac{2}{3}x^3y\right)^2 = \dfrac{200x^2y^4}{-125x^3y^3} \times \dfrac{4x^6y^2}{9} = \dfrac{-8y}{5x} \times \dfrac{4x^6y^2}{9} = \dfrac{-32x^5y^3}{45}$

(6) $(-3ab^2)^3 \times \left(-\dfrac{a}{2b}\right)^4 \div \left(-\dfrac{4}{5}a^2b\right)^2 = -27a^3b^6 \times \dfrac{a^4}{16b^4} \times \dfrac{25}{16a^4b^2} = \dfrac{-27a^3b^6 \times a^4 \times 25}{256a^4b^6} = \dfrac{-675a^3}{256}$

(1) $\dfrac{9a^3b^6}{2}$	(2) $\dfrac{-24b^2}{a}$	(3) $\dfrac{-x^7}{2y^2}$
(4) $\dfrac{-25x}{18y^2}$	(5) $\dfrac{-32x^5y^3}{45}$	(6) $\dfrac{-675a^3}{256}$