

中2数学 式の計算 No.1

解答

1 [指数法則] 指数法則をまとめなさい。

$$(1) a^m \times a^n = \boxed{a^{m+n}} \quad a^m \div a^n = \boxed{a^{m-n}}$$

$$(2) (a^m)^n = \boxed{a^{mn}}$$

$$(3) (ab)^n = \boxed{a^n b^n} \quad \left(\frac{a}{b}\right)^n = \boxed{\frac{a^n}{b^n}}$$

2 [指数法則] 次の計算をしなさい。

$$(1) a^4 \times a^7 \\ = a^{4+7} \\ = a^{11} \dots \boxed{\text{答}}$$

$$(2) a^2 \times a^3 \times a^4 \\ = a^{2+3+4} \\ = a^9 \dots \boxed{\text{答}}$$

$$(3) (3a)^3 \\ = 3^3 a^3 \\ = 27a^3 \dots \boxed{\text{答}}$$

$$(4) (5ab)^2 \\ = 5^2 a^2 b^2 \\ = 25a^2 b^2 \dots \boxed{\text{答}}$$

$$(5) (a^3)^2 \\ = a^{3 \times 2} \\ = a^6 \dots \boxed{\text{答}}$$

$$(6) (a^2 b)^3 \\ = (a^2)^3 b^3 \\ = a^{2 \times 3} b^3 \\ = a^6 b^3 \dots \boxed{\text{答}}$$

$$(7) a^6 \div a^4 \\ = a^{6-4} \\ = a^2 \dots \boxed{\text{答}}$$

$$(8) a^2 \times a^5 \div a^3 \\ = a^{2+5-3} \\ = a^4 \dots \boxed{\text{答}}$$

$$(9) (a^3)^3 \div (a^2)^2 \\ = a^{3 \times 3} \div a^{2 \times 2} \\ = a^{9-4} \\ = a^5 \dots \boxed{\text{答}}$$

$$(10) \left(\frac{a}{3}\right)^4 \\ = \frac{a^4}{3^4} \\ = \frac{a^4}{81} \dots \boxed{\text{答}}$$

$$(11) \left(\frac{ab}{5}\right)^2 \\ = \frac{(ab)^2}{5^2} \\ = \frac{a^2 b^2}{25} \dots \boxed{\text{答}}$$

$$(12) \left(\frac{a^3}{4b}\right)^2 \\ = \frac{(a^3)^2}{(4b)^2} \\ = \frac{a^6}{16b^2} \dots \boxed{\text{答}}$$