

反射テスト 文字式 指数法則 乗除 基礎 02

1. 次の計算をせよ。(S級 25秒, A級 40秒, B級 1分10秒, C級 1分40秒)

(1) $x^3 \times x^3$

(2) $a^3 \div a^4$

(3) $t^4 \times t \times t^2$

(4) $n^3 \div n^5 \times n^2$

(5) $(y^4)^2 \div y^7$

(6) $x^4 \div x^7 \div (x^2)^3$

(7) $(x^2)^3 \div x^5 \div x \times x^2$

(8) $a^5 \div (a^3)^4 \times a^2 \div a^6$

2. 次の計算をせよ。(S級 25 秒, A級 40 秒, B級 1 分 10 秒, C級 1 分 40 秒)

(1) $x^4 \times x^4$

(2) $a^5 \div a^7$

(3) $t^5 \times t \times t^3$

(4) $n^4 \div n^7 \times n^2$

(5) $(y^2)^4 \div y^7$

(6) $x^3 \div x^9 \div (x^2)^3$

(7) $(x^2)^3 \div x^8 \div x \times x^3$

(8) $a^9 \div (a^2)^7 \times a^6 \div a^5$

反射テスト 文字式 指数法則 乗除 基礎 02 解答解説

1. 次の計算をせよ。(S級 25秒, A級 40秒, B級 1分10秒, C級 1分40秒)

(1) $x^3 \times x^3$

$$\begin{aligned} &= x^{3+3} \\ &= x^6 \quad \dots\text{答え} \end{aligned}$$

(2) $a^3 \div a^4$

$$\begin{aligned} &= \frac{a^3}{a^4} \\ &= \frac{1}{a^{4-3}} \\ &= \frac{1}{a} \quad \dots\text{答え} \end{aligned}$$

(3) $t^4 \times t \times t^2$

$$\begin{aligned} &= t^{4+1+2} \\ &= t^7 \quad \dots\text{答え} \end{aligned}$$

(4) $n^3 \div n^5 \times n^2$

$$\begin{aligned} &= \frac{n^3 \times n^2}{n^5} \\ &= \frac{n^5}{n^5} \\ &= 1 \quad \dots\text{答え} \end{aligned}$$

(5) $(y^4)^2 \div y^7$

$$\begin{aligned} &= y^8 \div y^7 \\ &= \frac{y^8}{y^7} \\ &= y \quad \dots\text{答え} \end{aligned}$$

(6) $x^4 \div x^7 \div (x^2)^3$

$$\begin{aligned} &= x^4 \div x^7 \div x^6 \\ &= \frac{x^4}{x^7 \times x^6} \\ &= \frac{x^4}{x^{13}} \\ &= \frac{1}{x^9} \quad \dots\text{答え} \end{aligned}$$

(7) $(x^2)^3 \div x^5 \div x \times x^2$

$$\begin{aligned} &= x^6 \div x^5 \div x \times x^2 \\ &= \frac{x^6 \times x^2}{x^5 \times x} \\ &= \frac{x^8}{x^6} \\ &= x^2 \quad \dots\text{答え} \end{aligned}$$

(8) $a^5 \div (a^3)^4 \times a^2 \div a^6$

$$\begin{aligned} &= a^5 \div a^{12} \times a^2 \div a^6 \\ &= \frac{a^5 \times a^2}{a^{12} \times a^6} \\ &= \frac{a^7}{a^{18}} \\ &= \frac{1}{a^{11}} \quad \dots\text{答え} \end{aligned}$$

2. 次の計算をせよ。(S級 25 秒, A級 40 秒, B級 1 分 10 秒, C級 1 分 40 秒)

(1) $x^4 \times x^4$

$$\begin{aligned} &= x^{4+4} \\ &= x^8 \quad \dots\text{答え} \end{aligned}$$

(2) $a^5 \div a^7$

$$\begin{aligned} &= \frac{a^5}{a^7} \\ &= \frac{1}{a^{7-5}} \\ &= \frac{1}{a^2} \quad \dots\text{答え} \end{aligned}$$

(3) $t^5 \times t \times t^3$

$$\begin{aligned} &= t^{5+1+3} \\ &= t^9 \quad \dots\text{答え} \end{aligned}$$

(4) $n^4 \div n^7 \times n^2$

$$\begin{aligned} &= \frac{n^4 \times n^2}{n^7} \\ &= \frac{n^6}{n^7} \\ &= \frac{1}{n} \quad \dots\text{答え} \end{aligned}$$

(5) $(y^2)^4 \div y^7$

$$\begin{aligned} &= y^8 \div y^7 \\ &= \frac{y^8}{y^7} \\ &= y \quad \dots\text{答え} \end{aligned}$$

(6) $x^3 \div x^9 \div (x^2)^3$

$$\begin{aligned} &= x^3 \div x^9 \div x^6 \\ &= \frac{x^3}{x^9 \times x^6} \\ &= \frac{x^3}{x^{15}} \\ &= \frac{1}{x^{12}} \quad \dots\text{答え} \end{aligned}$$

(7) $(x^2)^3 \div x^8 \div x \times x^3$

$$\begin{aligned} &= x^6 \div x^8 \div x \times x^3 \\ &= \frac{x^6 \times x^3}{x^8 \times x} \\ &= \frac{x^9}{x^9} \\ &= 1 \quad \dots\text{答え} \end{aligned}$$

(8) $a^9 \div (a^2)^7 \times a^6 \div a^5$

$$\begin{aligned} &= a^9 \div a^{14} \times a^6 \div a^5 \\ &= \frac{a^9 \times a^6}{a^{14} \times a^5} \\ &= \frac{a^{15}}{a^{19}} \\ &= \frac{1}{a^4} \quad \dots\text{答え} \end{aligned}$$