

1 次の計算をなさい。

①  $\sqrt{7} \times \sqrt{2}$

②  $\sqrt{5} \times \sqrt{6}$

③  $\sqrt{2} \times \sqrt{5}$

④  $\sqrt{5} \times \sqrt{13}$

2 次の数を  $a\sqrt{b}$  の形になさい。

①  $\sqrt{45}$

②  $\sqrt{75}$

3 次の計算をし、根号の中はできるだけ小さい自然数になさい。

①  $\sqrt{12} \times \sqrt{6}$

②  $\sqrt{8} \times \sqrt{18}$

③  $2\sqrt{3} \times 3\sqrt{6}$

④  $\sqrt{8} \times (-2\sqrt{6})$

⑤  $\sqrt{20} \times \sqrt{18}$

⑥  $(-2\sqrt{7})^2$

1 次の計算をなさい。

$$\begin{aligned} \textcircled{1} \quad & \sqrt{7} \times \sqrt{2} \\ & = \sqrt{7 \times 2} \\ & = \sqrt{14} \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & \sqrt{5} \times \sqrt{6} \\ & = \sqrt{5 \times 6} \\ & = \sqrt{30} \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad & \sqrt{2} \times \sqrt{5} \\ & = \sqrt{2 \times 5} \\ & = \sqrt{10} \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad & \sqrt{5} \times \sqrt{13} \\ & = \sqrt{5 \times 13} \\ & = \sqrt{65} \end{aligned}$$

2 次の数を  $a\sqrt{b}$  の形になさい。

$$\begin{aligned} \textcircled{1} \quad & \sqrt{45} \\ & = \sqrt{9 \times 5} \\ & = \sqrt{3^2 \times 5} \\ & = 3\sqrt{5} \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & \sqrt{75} \\ & = \sqrt{25 \times 3} \\ & = \sqrt{5^2 \times 3} \\ & = 5\sqrt{3} \end{aligned}$$

3 次の計算をし、根号の中はできるだけ小さい自然数になさい。

$$\begin{aligned} \textcircled{1} \quad & \sqrt{12} \times \sqrt{6} \\ & = 2\sqrt{3} \times \sqrt{2} \times \sqrt{3} \\ & = 2 \times (\sqrt{3})^2 \times \sqrt{2} \\ & = 6\sqrt{2} \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & \sqrt{8} \times \sqrt{18} \\ & = 2\sqrt{2} \times 3\sqrt{2} \\ & = 2 \times 3 \times (\sqrt{2})^2 \\ & = 12 \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad & 2\sqrt{3} \times 3\sqrt{6} \\ & = 2\sqrt{3} \times 3 \times \sqrt{2} \times \sqrt{3} \\ & = 2 \times 3 \times (\sqrt{3})^2 \times \sqrt{2} \\ & = 18\sqrt{2} \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad & \sqrt{8} \times (-2\sqrt{6}) \\ & = 2\sqrt{2} \times (-2) \times \sqrt{2} \times \sqrt{3} \\ & = -2 \times 2 \times (\sqrt{2})^2 \times \sqrt{3} \\ & = -8\sqrt{3} \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad & \sqrt{20} \times \sqrt{18} \\ & = 2\sqrt{5} \times 3\sqrt{2} \\ & = 2 \times 3 \times \sqrt{2} \times \sqrt{5} \\ & = 6\sqrt{10} \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad & (-2\sqrt{7})^2 \\ & = 2^2 \times (\sqrt{7})^2 \\ & = 4 \times 7 \\ & = 28 \end{aligned}$$