

1 次の計算をなさい。

① $\sqrt{5} \times \sqrt{2}$

② $\sqrt{3} \times \sqrt{2}$

③ $\sqrt{6} \times \sqrt{5}$

④ $\sqrt{7} \times \sqrt{3}$

2 次の数を $a\sqrt{b}$ の形になさい。

① $\sqrt{20}$

② $\sqrt{27}$

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 $\sqrt{8} \times \sqrt{6}$

② $\sqrt{6} \times \sqrt{15}$

③ $2\sqrt{3} \times 4\sqrt{6}$

④ $\sqrt{6} \times (-2\sqrt{5})$

⑤ $\sqrt{50} \times \sqrt{27}$

⑥ $(-2\sqrt{5})^2$

1 次の計算をなさい。

$$\begin{aligned} \textcircled{1} \quad & \sqrt{5} \times \sqrt{2} \\ & = \sqrt{5 \times 2} \\ & = \sqrt{10} \end{aligned}$$

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

$$\begin{aligned} \textcircled{3} \quad & \sqrt{6} \times \sqrt{5} \\ & = \sqrt{6 \times 5} \\ & = \sqrt{30} \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad & \sqrt{7} \times \sqrt{3} \\ & = \sqrt{7 \times 3} \\ & = \sqrt{21} \end{aligned}$$

2 次の数を $a\sqrt{b}$ の形になさい。

$$\begin{aligned} \textcircled{1} \quad & \sqrt{20} \\ & = \sqrt{4 \times 5} \\ & = \sqrt{2^2 \times 5} \\ & = 2\sqrt{5} \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & \sqrt{27} \\ & = \sqrt{9 \times 3} \\ & = \sqrt{3^2 \times 3} \\ & = 3\sqrt{3} \end{aligned}$$

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。

$$\begin{aligned} \textcircled{1} \quad & \sqrt{8} \times \sqrt{6} \\ & = 2\sqrt{2} \times \sqrt{2} \times \sqrt{3} \\ & = 2 \times (\sqrt{2})^2 \times \sqrt{3} \\ & = 4\sqrt{3} \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & \sqrt{6} \times \sqrt{15} \\ & = \sqrt{2} \times \sqrt{3} \times \sqrt{3} \times \sqrt{5} \\ & = (\sqrt{3})^2 \times \sqrt{2} \times \sqrt{5} \\ & = 3\sqrt{10} \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad & 2\sqrt{3} \times 4\sqrt{6} \\ & = 2\sqrt{3} \times 4 \times \sqrt{2} \times \sqrt{3} \\ & = 2 \times 4 \times (\sqrt{3})^2 \times \sqrt{2} \\ & = 24\sqrt{2} \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad & \sqrt{6} \times (-2\sqrt{5}) \\ & = -2 \times \sqrt{5} \times \sqrt{6} \\ & = -2\sqrt{30} \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad & \sqrt{50} \times \sqrt{27} \\ & = 5\sqrt{2} \times 3\sqrt{3} \\ & = 5 \times 3 \times \sqrt{2} \times \sqrt{3} \\ & = 15\sqrt{6} \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad & (-2\sqrt{5})^2 \\ & = 2^2 \times (\sqrt{5})^2 \\ & = 4 \times 5 \\ & = 20 \end{aligned}$$