

1 次の計算をなさい。

① $\sqrt{2} \times \sqrt{3}$

② $\sqrt{5} \times \sqrt{7}$

③ $\sqrt{3} \times \sqrt{5}$

④ $\sqrt{6} \times \sqrt{11}$

2 次の数を $a\sqrt{b}$ の形になさい。

① $\sqrt{32}$

② $\sqrt{50}$

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 $\sqrt{12} \times \sqrt{8}$

② $\sqrt{7} \times \sqrt{18}$

③ $3\sqrt{5} \times 4\sqrt{6}$

④ $\sqrt{7} \times (-3\sqrt{8})$

⑤ $\sqrt{24} \times \sqrt{45}$

⑥ $(-3\sqrt{6})^2$

1 次の計算をなさい。

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

$$\begin{aligned} \textcircled{2} \quad & \sqrt{5} \times \sqrt{7} \\ & = \sqrt{5 \times 7} \\ & = \sqrt{35} \end{aligned}$$

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

$$\begin{aligned} \textcircled{4} \quad & \sqrt{6} \times \sqrt{11} \\ & = \sqrt{6 \times 11} \\ & = \sqrt{66} \end{aligned}$$

2 次の数を $a\sqrt{b}$ の形になさい。

$$\begin{aligned} \textcircled{1} \quad & \sqrt{32} \\ & = \sqrt{16 \times 2} \\ & = \sqrt{4^2 \times 2} \\ & = 4\sqrt{2} \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & \sqrt{50} \\ & = \sqrt{25 \times 2} \\ & = \sqrt{5^2 \times 2} \\ & = 5\sqrt{2} \end{aligned}$$

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。

$$\begin{aligned} \textcircled{1} \quad & \sqrt{12} \times \sqrt{8} \\ & = 2\sqrt{3} \times 2\sqrt{2} \\ & = 2 \times 2 \times \sqrt{2} \times \sqrt{3} \\ & = 4\sqrt{6} \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & \sqrt{7} \times \sqrt{18} \\ & = \sqrt{7} \times 3\sqrt{2} \\ & = 3 \times \sqrt{2} \times \sqrt{7} \\ & = 3\sqrt{14} \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad & 3\sqrt{5} \times 4\sqrt{6} \\ & = 3 \times 4 \times \sqrt{5} \times \sqrt{6} \\ & = 12\sqrt{30} \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad & \sqrt{7} \times (-3\sqrt{8}) \\ & = -3 \times \sqrt{7} \times \sqrt{8} \\ & = -3\sqrt{56} \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad & \sqrt{24} \times \sqrt{45} \\ & = 2\sqrt{6} \times 3\sqrt{5} \\ & = 2 \times 3 \times \sqrt{5} \times \sqrt{6} \\ & = 6\sqrt{30} \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad & (-3\sqrt{6})^2 \\ & = 3^2 \times (\sqrt{6})^2 \\ & = 9 \times 6 \\ & = 54 \end{aligned}$$