

■ 次の式を計算しなさい。

① $(\sqrt{6} + 3)(\sqrt{6} + 4)$

⑦ $(7 - 3\sqrt{2})(7 + 3\sqrt{2})$

⑬ $(\sqrt{5} - 2\sqrt{3})^2$

② $(\sqrt{10} - \sqrt{2})(\sqrt{10} + \sqrt{2})$

⑧ $(2\sqrt{5} + 1)(2\sqrt{5} + 3)$

⑭ $(2\sqrt{2} + 1)(2\sqrt{2} - 6)$

③ $(\sqrt{10} + 1)(\sqrt{10} - 4)$

⑨ $(\sqrt{3} + \sqrt{7})^2$

⑮ $(5 - \sqrt{2})^2$

④ $(3\sqrt{2} + \sqrt{6})(3\sqrt{2} - \sqrt{6})$

⑩ $(2\sqrt{3} + 2)(2\sqrt{3} - 2)$

⑯ $(\sqrt{15} - 1)(\sqrt{15} + 1)$

⑤ $(4\sqrt{2} + 6)^2$

⑪ $(3\sqrt{3} - 2)(3\sqrt{3} + 3)$

⑰ $(\sqrt{7} - 3)^2$

⑥ $(\sqrt{13} - 2)(\sqrt{13} + 4)$

⑫ $(8 + 4\sqrt{3})^2$

⑱ $(4 + \sqrt{3})(4 - \sqrt{3})$

■ 次の式を計算しなさい。

$$\begin{aligned} \textcircled{1} (\sqrt{6} + 3)(\sqrt{6} + 4) \\ &= 6 + 4\sqrt{6} + 3\sqrt{6} + 12 \\ &= 18 + 7\sqrt{6} \end{aligned}$$

$$\begin{aligned} \textcircled{2} (\sqrt{10} - \sqrt{2})(\sqrt{10} + \sqrt{2}) \\ &= 10 - 2 \\ &= 8 \end{aligned}$$

$$\begin{aligned} \textcircled{3} (\sqrt{10} + 1)(\sqrt{10} - 4) \\ &= 10 - 4\sqrt{10} + \sqrt{10} - 4 \\ &= 6 - 3\sqrt{10} \end{aligned}$$

$$\begin{aligned} \textcircled{4} (3\sqrt{2} + \sqrt{6})(3\sqrt{2} - \sqrt{6}) \\ &= 18 - 6 \\ &= 12 \end{aligned}$$

$$\begin{aligned} \textcircled{5} (4\sqrt{2} + 6)^2 \\ &= 32 + 48\sqrt{2} + 36 \\ &= 68 + 48\sqrt{2} \end{aligned}$$

$$\begin{aligned} \textcircled{6} (\sqrt{13} - 2)(\sqrt{13} + 4) \\ &= 13 + 4\sqrt{13} - 2\sqrt{13} - 8 \\ &= 5 + 2\sqrt{13} \end{aligned}$$

$$\begin{aligned} \textcircled{7} (7 - 3\sqrt{2})(7 + 3\sqrt{2}) \\ &= 49 - 18 \\ &= 31 \end{aligned}$$

$$\begin{aligned} \textcircled{8} (2\sqrt{5} + 1)(2\sqrt{5} + 3) \\ &= 20 + 6\sqrt{5} + 2\sqrt{5} + 3 \\ &= 23 + 8\sqrt{5} \end{aligned}$$

$$\begin{aligned} \textcircled{9} (\sqrt{3} + \sqrt{7})^2 \\ &= 3 + 2\sqrt{21} + 7 \\ &= 10 + 2\sqrt{21} \end{aligned}$$

$$\begin{aligned} \textcircled{10} (2\sqrt{3} + 2)(2\sqrt{3} - 2) \\ &= 12 - 4 \\ &= 8 \end{aligned}$$

$$\begin{aligned} \textcircled{11} (3\sqrt{3} - 2)(3\sqrt{3} + 3) \\ &= 27 + 9\sqrt{3} - 6\sqrt{3} - 6 \\ &= 21 + 3\sqrt{3} \end{aligned}$$

$$\begin{aligned} \textcircled{12} (8 + 4\sqrt{3})^2 \\ &= 64 + 64\sqrt{3} + 48 \\ &= 112 + 64\sqrt{3} \end{aligned}$$

$$\begin{aligned} \textcircled{13} (\sqrt{5} - 2\sqrt{3})^2 \\ &= 5 - 4\sqrt{15} + 12 \\ &= 17 - 4\sqrt{15} \end{aligned}$$

$$\begin{aligned} \textcircled{14} (2\sqrt{2} + 1)(2\sqrt{2} - 6) \\ &= 8 - 12\sqrt{2} + 2\sqrt{2} - 6 \\ &= 2 - 10\sqrt{2} \end{aligned}$$

$$\begin{aligned} \textcircled{15} (5 - \sqrt{2})^2 \\ &= 25 - 10\sqrt{2} + 2 \\ &= 27 - 10\sqrt{2} \end{aligned}$$

$$\begin{aligned} \textcircled{16} (\sqrt{15} - 1)(\sqrt{15} + 1) \\ &= 15 - 1 \\ &= 14 \end{aligned}$$

$$\begin{aligned} \textcircled{17} (\sqrt{7} - 3)^2 \\ &= 7 - 6\sqrt{7} + 9 \\ &= 16 - 6\sqrt{7} \end{aligned}$$

$$\begin{aligned} \textcircled{18} (4 + \sqrt{3})(4 - \sqrt{3}) \\ &= 16 - 3 \\ &= 13 \end{aligned}$$