

平方根の計算練習（1）

学習日 月 日

年 組 番 氏名

(1) 次の計算をなさい。

① $\sqrt{3} - 4\sqrt{3} + 2\sqrt{3}$

② $3\sqrt{5} - \sqrt{3} + \sqrt{5} + 4\sqrt{3}$

⑨ $\sqrt{24} - \frac{8}{\sqrt{2}} + \sqrt{6}$

⑩ $\frac{5}{\sqrt{3}} - \frac{3}{\sqrt{12}}$

③ $-2\sqrt{5} + 7\sqrt{5} - 3\sqrt{5}$

④ $\sqrt{6} - 2 + 4\sqrt{6} - 5$

⑪ $\frac{8}{\sqrt{2}} + \sqrt{18}$

⑫ $\frac{4}{\sqrt{12}} - \frac{5}{\sqrt{3}}$

⑤ $\sqrt{32} - 3\sqrt{18}$

⑥ $-5\sqrt{12} + 2\sqrt{27} + \sqrt{75}$

⑬ $\frac{\sqrt{75}}{2} - \sqrt{12} + \sqrt{\frac{27}{4}}$

⑭ $\frac{\sqrt{18}}{\sqrt{3}} - \frac{\sqrt{3}}{\sqrt{6}} + 2\sqrt{6}$

⑦ $2\sqrt{8} - 3\sqrt{50} + 3\sqrt{12}$

⑧ $3\sqrt{28} + 2\sqrt{63} - \sqrt{49}$

⑮ $3\sqrt{108} - \sqrt{147} + \frac{24}{\sqrt{3}}$

⑯ $\frac{\sqrt{18}}{3} - \frac{6}{\sqrt{8}} + \frac{1}{\sqrt{2}}$

平方根の計算練習（１）

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(1) 次の計算をなさい。

$$\begin{aligned} \textcircled{1} \quad & \sqrt{3} - 4\sqrt{3} + 2\sqrt{3} \\ & = -\sqrt{3} \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & 3\sqrt{5} - \sqrt{3} + \sqrt{5} + 4\sqrt{3} \\ & = 4\sqrt{5} + 3\sqrt{3} \end{aligned}$$

$$\begin{aligned} \textcircled{9} \quad & \sqrt{24} - \frac{8}{\sqrt{2}} + \sqrt{6} \\ & = 2\sqrt{6} - 4\sqrt{2} + \sqrt{6} \\ & = 3\sqrt{6} - 4\sqrt{2} \end{aligned}$$

$$\begin{aligned} \textcircled{10} \quad & \frac{5}{\sqrt{3}} - \frac{3}{\sqrt{12}} \\ & = \frac{5\sqrt{3}}{3} - \frac{3}{2\sqrt{3}} \\ & = \left(\frac{5}{3} - \frac{1}{2}\right)\sqrt{3} = \frac{7\sqrt{3}}{6} \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad & -2\sqrt{5} + 7\sqrt{5} - 3\sqrt{5} \\ & = 2\sqrt{5} \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad & \sqrt{6} - 2 + 4\sqrt{6} - 5 \\ & = 5\sqrt{6} - 7 \end{aligned}$$

$$\begin{aligned} \textcircled{11} \quad & \frac{8}{\sqrt{2}} + \sqrt{18} \\ & = 4\sqrt{2} + 3\sqrt{2} \\ & = 7\sqrt{2} \end{aligned}$$

$$\begin{aligned} \textcircled{12} \quad & \frac{4}{\sqrt{12}} - \frac{5}{\sqrt{3}} \\ & = \frac{2\sqrt{3}}{3} - \frac{5\sqrt{3}}{3} \\ & = -\sqrt{3} \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad & \sqrt{32} - 3\sqrt{18} \\ & = 4\sqrt{2} - 9\sqrt{2} \\ & = -5\sqrt{2} \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad & -5\sqrt{12} + 2\sqrt{27} + \sqrt{75} \\ & = -10\sqrt{3} + 6\sqrt{3} + 5\sqrt{3} \\ & = \sqrt{3} \end{aligned}$$

$$\begin{aligned} \textcircled{13} \quad & \frac{\sqrt{75}}{2} - \sqrt{12} + \sqrt{\frac{27}{4}} \\ & = \frac{5\sqrt{3}}{2} - 2\sqrt{3} + \frac{3\sqrt{3}}{2} \\ & = 2\sqrt{3} \end{aligned}$$

$$\begin{aligned} \textcircled{14} \quad & \frac{\sqrt{18}}{\sqrt{3}} - \frac{\sqrt{3}}{\sqrt{6}} + 2\sqrt{6} \\ & = \sqrt{6} - \frac{\sqrt{2}}{2} + 2\sqrt{6} \\ & = 3\sqrt{6} - \frac{\sqrt{2}}{2} \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad & 2\sqrt{8} - 3\sqrt{50} + 3\sqrt{12} \\ & = 4\sqrt{2} - 15\sqrt{2} + 6\sqrt{3} \\ & = 6\sqrt{3} - 11\sqrt{2} \end{aligned}$$

$$\begin{aligned} \textcircled{8} \quad & 3\sqrt{28} + 2\sqrt{63} - \sqrt{49} \\ & = 6\sqrt{7} + 6\sqrt{7} - 7 \\ & = 12\sqrt{7} - 7 \end{aligned}$$

$$\begin{aligned} \textcircled{15} \quad & 3\sqrt{108} - \sqrt{147} + \frac{24}{\sqrt{3}} \\ & = 3\sqrt{36 \times 3} - \sqrt{49 \times 3} + 8\sqrt{3} \\ & = 18\sqrt{3} - 7\sqrt{3} + 8\sqrt{3} \\ & = 19\sqrt{3} \end{aligned}$$

$$\begin{aligned} \textcircled{16} \quad & \frac{\sqrt{18}}{3} - \frac{6}{\sqrt{8}} + \frac{1}{\sqrt{2}} \\ & = \frac{3\sqrt{2}}{3} - \frac{6}{2\sqrt{2}} + \frac{1}{\sqrt{2}} \\ & = \sqrt{2} - \frac{3\sqrt{2}}{2} + \frac{\sqrt{2}}{2} \\ & = 0 \end{aligned}$$