

6 平方根 ③ ～根号をふくむ式の計算～

学年		組		氏名	
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1 次の数を $\sqrt{a}$ の形で表しなさい。

$$\begin{aligned} (1) \quad & 4\sqrt{2} \\ & = \sqrt{16} \sqrt{2} \\ & = \sqrt{32} \end{aligned}$$

$$\sqrt{32}$$

$$\begin{aligned} (2) \quad & 6\sqrt{3} \\ & = \sqrt{36} \sqrt{3} \\ & = \sqrt{108} \end{aligned}$$

$$\sqrt{108}$$

2 次の数の分母を有理化しなさい。

$$\begin{aligned} (1) \quad & \frac{\sqrt{3}}{\sqrt{7}} \\ & = \frac{\sqrt{3} \sqrt{7}}{\sqrt{7} \sqrt{7}} \\ & = \frac{\sqrt{21}}{7} \end{aligned}$$

$$\frac{\sqrt{21}}{7}$$

$$\begin{aligned} (2) \quad & \frac{3}{2\sqrt{3}} = \frac{3\sqrt{3}}{2\sqrt{3}\sqrt{3}} \\ & = \frac{3\sqrt{3}}{6} \\ & = \frac{\sqrt{3}}{2} \end{aligned}$$

$$\frac{\sqrt{3}}{2}$$

4 次の計算をしなさい。

$$\begin{aligned} (1) \quad & \sqrt{12} \times \sqrt{3} \\ & = \sqrt{36} \\ & = 6 \end{aligned}$$

$$6$$

$$\begin{aligned} (2) \quad & \sqrt{54} \div \sqrt{6} \\ & = \sqrt{9} \\ & = 3 \end{aligned}$$

$$3$$

$$\begin{aligned} (3) \quad & 2\sqrt{18} - \sqrt{8} \\ & = 2 \times 3\sqrt{2} - 2\sqrt{2} \\ & = 6\sqrt{2} - 2\sqrt{2} \\ & = 4\sqrt{2} \end{aligned}$$

$$4\sqrt{2}$$

$$\begin{aligned} (4) \quad & \sqrt{48} + 9\sqrt{3} - \sqrt{75} \\ & = 4\sqrt{3} + 9\sqrt{3} - 5\sqrt{3} \\ & = (4+9-5)\sqrt{3} \\ & = 8\sqrt{3} \end{aligned}$$

$$8\sqrt{3}$$

$$\begin{aligned} (5) \quad & \sqrt{21} \times \sqrt{3} - \sqrt{7} \\ & = \sqrt{63} - \sqrt{7} \\ & = 3\sqrt{7} - \sqrt{7} \\ & = 2\sqrt{7} \end{aligned}$$

$$2\sqrt{7}$$

$$\begin{aligned} (6) \quad & 4\sqrt{2} - \frac{2}{\sqrt{2}} \\ & = 4\sqrt{2} - \frac{2\sqrt{2}}{\sqrt{2}\sqrt{2}} \\ & = 4\sqrt{2} - \frac{2\sqrt{2}}{2} \\ & = 4\sqrt{2} - \sqrt{2} \\ & = 3\sqrt{2} \end{aligned}$$

$$3\sqrt{2}$$