

## 平方根の変形の練習

学習日 月 日

年 組 番 氏名

(1) 次の数を  $\sqrt{a}$  の形に変形しなさい。

①  $4\sqrt{2}$

②  $3\sqrt{7}$

③  $12\sqrt{3}$

④  $5\sqrt{0.2}$

⑤  $\frac{2}{3}\sqrt{6}$

⑥  $\frac{\sqrt{12}}{4}$

⑦  $4\sqrt{\frac{3}{8}}$

⑧  $\frac{1}{5}\sqrt{\frac{5}{7}}$

(2) 次の数を  $a\sqrt{b}$  の形に変形しなさい。

①  $\sqrt{72}$

②  $\sqrt{125}$

③  $\sqrt{135}$

④  $\sqrt{147}$

⑤  $\sqrt{252}$

⑥  $\sqrt{\frac{5}{4}}$

⑦  $\sqrt{0.07}$

⑧  $\sqrt{0.18}$

# 平方根の変形の練習

学習日 月 日

年 組 番 氏名

(1) 次の数を  $\sqrt{a}$  の形に変形しなさい。

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

$$\begin{aligned} \textcircled{2} \quad & 3\sqrt{7} \\ & = \sqrt{9} \times \sqrt{7} \\ & = \sqrt{63} \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad & 12\sqrt{3} \\ & = \sqrt{144} \times \sqrt{3} \\ & = \sqrt{432} \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad & 5\sqrt{0.2} \\ & = \sqrt{25} \times \sqrt{\frac{1}{5}} \\ & = \sqrt{5} \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad & \frac{2}{3}\sqrt{6} \\ & = \sqrt{\frac{4}{9}} \times \sqrt{6} \\ & = \sqrt{\frac{8}{3}} \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad & \frac{\sqrt{12}}{4} \\ & = \frac{\sqrt{12}}{\sqrt{16}} \\ & = \sqrt{\frac{3}{4}} \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad & 4\sqrt{\frac{3}{8}} \\ & = \sqrt{16} \times \sqrt{\frac{3}{8}} \\ & = \sqrt{6} \end{aligned}$$

$$\begin{aligned} \textcircled{8} \quad & \frac{1}{5}\sqrt{\frac{5}{7}} \\ & = \sqrt{\frac{1}{25}} \times \sqrt{\frac{5}{7}} \\ & = \sqrt{\frac{1}{35}} \end{aligned}$$

(2) 次の数を  $a\sqrt{b}$  の形に変形しなさい。

$$\begin{aligned} \textcircled{1} \quad & \sqrt{72} \\ & = \sqrt{8} \times \sqrt{9} \\ & = 2\sqrt{2} \times 3 \\ & = 6\sqrt{2} \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & \sqrt{125} \\ & = \sqrt{25} \times \sqrt{5} \\ & = 5\sqrt{5} \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad & \sqrt{135} \\ & = \sqrt{27} \times \sqrt{5} \\ & = 3\sqrt{3} \times \sqrt{5} \\ & = 3\sqrt{15} \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad & \sqrt{147} \\ & = \sqrt{3} \times \sqrt{49} \\ & = 7\sqrt{3} \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad & \sqrt{252} \\ & = \sqrt{36} \times \sqrt{7} \\ & = 6\sqrt{7} \end{aligned}$$

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

$$\begin{aligned} \textcircled{7} \quad & \sqrt{0.07} \\ & = \frac{\sqrt{7}}{\sqrt{100}} = \frac{\sqrt{7}}{10} \\ & = \frac{\sqrt{7}}{10} \end{aligned}$$

$$\begin{aligned} \textcircled{8} \quad & \sqrt{0.18} \\ & = \frac{\sqrt{2 \times 9}}{\sqrt{100}} = \frac{\sqrt{9} \times \sqrt{2}}{\sqrt{100}} \\ & = \frac{3\sqrt{2}}{10} \end{aligned}$$