

平方根 分母の有理化 基本

NO.2

名前

点

1 分母を有理化します。()にあてはまる数値を答えなさい。

$$\textcircled{1} \quad \frac{2}{\sqrt{7}} = \frac{2 \times \sqrt{(\quad)}}{\sqrt{7} \times \sqrt{(\quad)}} = \frac{2\sqrt{(\quad)}}{(\quad)}$$

$$\textcircled{2} \quad \frac{\sqrt{3}}{\sqrt{5}} = \frac{\sqrt{3} \times \sqrt{(\quad)}}{\sqrt{5} \times \sqrt{(\quad)}} = \frac{\sqrt{(\quad)}}{(\quad)}$$

$$\textcircled{3} \quad \frac{3}{2\sqrt{5}} = \frac{3 \times \sqrt{(\quad)}}{2\sqrt{5} \times \sqrt{(\quad)}} = \frac{3\sqrt{(\quad)}}{(\quad)}$$

$$\textcircled{4} \quad \frac{2\sqrt{2}}{3\sqrt{5}} = \frac{2\sqrt{2} \times \sqrt{(\quad)}}{3\sqrt{5} \times \sqrt{(\quad)}} = \frac{2\sqrt{(\quad)}}{(\quad)} = \frac{\sqrt{(\quad)}}{(\quad)}$$

$$\textcircled{5} \quad \frac{3}{\sqrt{12}} = \frac{3}{2\sqrt{(\quad)}} = \frac{3 \times \sqrt{(\quad)}}{2\sqrt{(\quad)} \times \sqrt{(\quad)}} = \frac{2\sqrt{(\quad)}}{(\quad)}$$

$$= \frac{\sqrt{(\quad)}}{(\quad)}$$

2 次の数を、分母が $\sqrt{\quad}$ をふくまない形に変形しなさい。

$$\textcircled{1} \quad \frac{1}{\sqrt{3}}$$

$$\textcircled{2} \quad \frac{1}{\sqrt{7}}$$

$$\textcircled{3} \quad \frac{4}{\sqrt{7}}$$

$$\textcircled{4} \quad \frac{\sqrt{2}}{\sqrt{5}}$$

解答

1

$$\textcircled{1} \quad \frac{2}{\sqrt{7}} = \frac{2 \times \sqrt{(7)}}{\sqrt{7} \times \sqrt{(7)}} = \frac{2\sqrt{(7)}}{7}$$

$$\textcircled{2} \quad \frac{\sqrt{3}}{\sqrt{5}} = \frac{\sqrt{3} \times \sqrt{(5)}}{\sqrt{5} \times \sqrt{(5)}} = \frac{\sqrt{(15)}}{(5)}$$

$$\textcircled{3} \quad \frac{3}{2\sqrt{5}} = \frac{3 \times \sqrt{(5)}}{2\sqrt{5} \times \sqrt{(5)}} = \frac{3\sqrt{(5)}}{(10)}$$

$$\textcircled{4} \quad \frac{2\sqrt{2}}{3\sqrt{5}} = \frac{2\sqrt{2} \times \sqrt{(5)}}{3\sqrt{5} \times \sqrt{(5)}} = \frac{2\sqrt{(10)}}{(15)}$$

$$\begin{aligned} \textcircled{5} \quad \frac{3}{\sqrt{12}} &= \frac{3}{2\sqrt{(3)}} = \frac{3 \times \sqrt{(3)}}{2\sqrt{(3)} \times \sqrt{(3)}} = \frac{3\sqrt{(3)}}{(6)} \\ &= \frac{\sqrt{(3)}}{(2)} \end{aligned}$$

2

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

$$\begin{aligned} \textcircled{2} \quad \frac{1}{\sqrt{7}} &= \frac{1 \times \sqrt{7}}{\sqrt{7} \times \sqrt{7}} \\ &= \frac{\sqrt{7}}{7} \end{aligned}$$

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

$$\begin{aligned} \textcircled{4} \quad \frac{\sqrt{2}}{\sqrt{5}} &= \frac{\sqrt{2} \times \sqrt{5}}{\sqrt{5} \times \sqrt{5}} \\ &= \frac{\sqrt{10}}{5} \end{aligned}$$