

93

平方根の乗除

年 組 番 名前

● 例題 1 ●

次の計算をなさい。

$$\begin{aligned}
 (1) \quad 2\sqrt{2} \times 3\sqrt{6} &= 2 \times 3 \times \sqrt{2} \times \sqrt{6} \\
 &= 6\sqrt{12} \\
 &= 6 \times 2\sqrt{3} \\
 &= 12\sqrt{3} \\
 &\rightarrow 70 \text{ の例題 1、} 91 \text{ の例題 1 へ}
 \end{aligned}$$

● 例題 2 ●

次の計算をなさい。

$$\begin{aligned}
 (1) \quad 6\sqrt{6} \div 3\sqrt{2} &= \frac{6\sqrt{6}}{3\sqrt{2}} \\
 &= 2\sqrt{3} \\
 &\rightarrow 70 \text{ の例題 3 へ}
 \end{aligned}$$

問1 次の計算をなさい。

$$\begin{aligned}
 (1) \quad 5\sqrt{2} \times 2\sqrt{3} \\
 = 5 \times 2 \times \sqrt{2} \times \sqrt{3} \\
 = 10\sqrt{6} \\
 \text{答. } \underline{10\sqrt{6}}
 \end{aligned}$$

$$\begin{aligned}
 (2) \quad 2\sqrt{3} \times 3\sqrt{5} \\
 = 2 \times 3 \times \sqrt{3} \times \sqrt{5} \\
 = 6\sqrt{15} \\
 \text{答. } \underline{6\sqrt{15}}
 \end{aligned}$$

$$\begin{aligned}
 (3) \quad 4\sqrt{2} \times \sqrt{7} \\
 = 4 \times \sqrt{2} \times \sqrt{7} \\
 = 4\sqrt{14} \\
 \text{答. } \underline{4\sqrt{14}}
 \end{aligned}$$

$$\begin{aligned}
 (4) \quad 3\sqrt{3} \times 4\sqrt{6} \\
 = 3 \times 4 \times \sqrt{3} \times \sqrt{6} \\
 = 12\sqrt{18} \\
 = 36\sqrt{2} \\
 \text{答. } \underline{36\sqrt{2}}
 \end{aligned}$$

$$\begin{aligned}
 (5) \quad 2\sqrt{10} \times 3\sqrt{5} \\
 = 2 \times 3 \times \sqrt{10} \times \sqrt{5} \\
 = 6\sqrt{50} \\
 = 30\sqrt{2} \\
 \text{答. } \underline{30\sqrt{2}}
 \end{aligned}$$

$$\begin{aligned}
 (6) \quad \sqrt{8} \times \sqrt{12} \\
 = \sqrt{96} \\
 = 4\sqrt{6} \\
 \text{答. } \underline{4\sqrt{6}}
 \end{aligned}$$

$$\begin{aligned}
 (7) \quad \sqrt{20} \times 2\sqrt{18} \\
 = 2 \times \sqrt{20} \times \sqrt{18} \\
 = 2\sqrt{360} \\
 = 12\sqrt{10} \\
 \text{答. } \underline{12\sqrt{10}}
 \end{aligned}$$

問2 次の計算をなさい。

$$\begin{aligned}
 (1) \quad 3\sqrt{6} \div \sqrt{3} &= \frac{3\sqrt{6}}{\sqrt{3}} \\
 &= 3\sqrt{2} \\
 \text{答. } \underline{3\sqrt{2}}
 \end{aligned}$$

$$\begin{aligned}
 (2) \quad 5\sqrt{10} \div \sqrt{5} &= \frac{5\sqrt{10}}{\sqrt{5}} \\
 &= 5\sqrt{2} \\
 \text{答. } \underline{5\sqrt{2}}
 \end{aligned}$$

$$\begin{aligned}
 (3) \quad 6\sqrt{6} \div 2\sqrt{3} &= \frac{6\sqrt{6}}{2\sqrt{3}} \\
 &= 3\sqrt{2} \\
 \text{答. } \underline{3\sqrt{2}}
 \end{aligned}$$

$$\begin{aligned}
 (4) \quad 12\sqrt{14} \div 4\sqrt{7} &= \frac{12\sqrt{14}}{4\sqrt{7}} \\
 &= 3\sqrt{2} \\
 \text{答. } \underline{3\sqrt{2}}
 \end{aligned}$$

$$\begin{aligned}
 (5) \quad 2\sqrt{5} \div \sqrt{10} &= \frac{2\sqrt{5}}{\sqrt{10}} = \frac{2}{\sqrt{2}} \\
 &= \sqrt{2} \\
 \text{答. } \underline{\sqrt{2}}
 \end{aligned}$$

$$\begin{aligned}
 (6) \quad 12\sqrt{5} \div 2\sqrt{15} &= \frac{12\sqrt{5}}{2\sqrt{15}} \\
 &= \frac{6}{\sqrt{3}} = 2\sqrt{3} \\
 \text{答. } \underline{2\sqrt{3}}
 \end{aligned}$$

$$\begin{aligned}
 (7) \quad 2\sqrt{10} \times 3\sqrt{3} \div 6\sqrt{6} \\
 = \frac{2\sqrt{10} \times 3\sqrt{3}}{6\sqrt{6}} = \sqrt{5} \\
 \text{答. } \underline{\sqrt{5}}
 \end{aligned}$$