

## 平方根の加法・減法(3)

【1】次の計算をなさい。

$$(1) 3\sqrt{5} - \sqrt{5} + 7\sqrt{5} = (3-1+7)\sqrt{5} \\ = 9\sqrt{5}$$

$$(2) -2\sqrt{3} + 6\sqrt{3} - \sqrt{3} = (-2+6-1)\sqrt{3} \\ = 3\sqrt{3}$$

$$(3) -3\sqrt{2} + 4\sqrt{6} + 7\sqrt{2} - 2\sqrt{6} \\ = (-3+7)\sqrt{2} + (4-2)\sqrt{6} \\ = 4\sqrt{2} + 2\sqrt{6}$$

$$(4) 10 + 5\sqrt{6} - 4 - 3\sqrt{6} \\ = 10 - 4 + (5-3)\sqrt{6} \\ = 6 + 2\sqrt{6}$$

【2】次の計算をなさい。

$$(1) 3\sqrt{2} - \sqrt{72} = 3\sqrt{2} - 6\sqrt{2} \\ = -3\sqrt{2}$$

$$(2) \sqrt{54} + \sqrt{24} = 3\sqrt{6} + 2\sqrt{6} \\ = 5\sqrt{6}$$

$$(3) 5\sqrt{5} - \sqrt{20} + \sqrt{45} \\ = 5\sqrt{5} - 2\sqrt{5} + 3\sqrt{5} \\ = 6\sqrt{5}$$

$$(4) \sqrt{3} - 2\sqrt{5} - \sqrt{12} + \sqrt{45} \\ = \sqrt{3} - 2\sqrt{5} - 2\sqrt{3} + 3\sqrt{5} \\ = -\sqrt{3} + \sqrt{5}$$

【3】次の計算をなさい。

$$(1) \sqrt{\frac{1}{6}} + 2\sqrt{6} = \frac{\sqrt{6}}{6} + 2\sqrt{6} \\ = \left(\frac{1}{6} + 2\right)\sqrt{6} \\ = \frac{13}{6}\sqrt{6}$$

$$(2) \sqrt{10} - \sqrt{\frac{2}{5}} = \sqrt{10} - \frac{\sqrt{2} \times \sqrt{5}}{\sqrt{5} \times \sqrt{5}} \\ = \sqrt{10} - \frac{\sqrt{10}}{5} \\ = \left(1 - \frac{1}{5}\right)\sqrt{10} = \frac{4}{5}\sqrt{10}$$

$$(3) 4\sqrt{3} - \frac{9}{\sqrt{3}} = 4\sqrt{3} - \frac{9\sqrt{3}}{3} \\ = (4-3)\sqrt{3} \\ = \sqrt{3}$$

$$(4) \frac{3}{\sqrt{2}} - \sqrt{32} = \frac{3\sqrt{2}}{2} - 4\sqrt{2} \\ = \left(\frac{3}{2} - 4\right)\sqrt{2} \\ = -\frac{5}{2}\sqrt{2}$$

