

平方根の加法・減法(2)

【1】次の計算をなさい。

$$(1) 7\sqrt{2} - 3\sqrt{2} = (7-3)\sqrt{2} \\ = 4\sqrt{2}$$

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

$$(3) 2\sqrt{5} + 4\sqrt{3} + 4\sqrt{5} - 8\sqrt{3} \\ = (2+4)\sqrt{5} + (4-8)\sqrt{3} \\ = 6\sqrt{5} - 4\sqrt{3}$$

$$(4) 8 - 4\sqrt{7} - 3 + 6\sqrt{7} \\ = 8 - 3 + (-4+6)\sqrt{7} \\ = 5 + 2\sqrt{7}$$

【2】次の計算をなさい。

$$(1) \sqrt{28} - 3\sqrt{7} = 2\sqrt{7} - 3\sqrt{7} \\ = -\sqrt{7}$$

$$(2) \sqrt{18} + \sqrt{50} = 3\sqrt{2} + 5\sqrt{2} \\ = 8\sqrt{2}$$

$$(3) \sqrt{2} + \sqrt{8} - 6\sqrt{2} \\ = \sqrt{2} + 2\sqrt{2} - 6\sqrt{2} \\ = -3\sqrt{2}$$

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

【3】次の計算をなさい。

$$(1) \sqrt{3} - \frac{1}{\sqrt{3}} = \sqrt{3} - \frac{\sqrt{3}}{3} \\ = \left(1 - \frac{1}{3}\right)\sqrt{3} \\ = \frac{2}{3}\sqrt{3}$$

$$(2) \sqrt{\frac{1}{2}} + 3\sqrt{2} = \frac{\sqrt{2}}{2} + 3\sqrt{2} \\ = \left(\frac{1}{2} + 3\right)\sqrt{2} \\ = \frac{7}{2}\sqrt{2}$$

$$(3) 5\sqrt{7} - \frac{14}{\sqrt{7}} = 5\sqrt{7} - \frac{14\sqrt{7}}{7} \\ = (5-2)\sqrt{7} \\ = 3\sqrt{7}$$

$$(4) \sqrt{24} - \frac{3}{\sqrt{6}} = 2\sqrt{6} - \frac{3\sqrt{6}}{6} \\ = \left(2 - \frac{1}{2}\right)\sqrt{6} \\ = \frac{3}{2}\sqrt{6}$$

