

例 2 2 書き写そう

(1) $6\sqrt{2} + \sqrt{2} - 3\sqrt{2} = (6+1-3)\sqrt{2} = 4\sqrt{2}$

(2) $4\sqrt{3} - \sqrt{12} + \sqrt{27} = 4\sqrt{3} - 2\sqrt{3} + 3\sqrt{3}$
 $= (4-2+3)\sqrt{3} = 5\sqrt{3}$

(3) $(3\sqrt{2} + \sqrt{3}) - (\sqrt{2} - 4\sqrt{3}) = (3-1)\sqrt{2} + (1+4)\sqrt{3}$
 $= 2\sqrt{2} + 5\sqrt{3}$

練習 3 8 次の式を計算せよ。

(1) $5\sqrt{3} - 2\sqrt{3} + \sqrt{3}$

(2) $\sqrt{2} + \sqrt{32} - \sqrt{72}$

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

(4) $(2\sqrt{5} + 3\sqrt{6}) - (\sqrt{96} - \sqrt{45})$

例題 6 次の式を計算せよ。

(1) $(2\sqrt{3} - \sqrt{5})(\sqrt{3} + 4\sqrt{5})$

(2) $(\sqrt{3} + \sqrt{2})^2$

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

練習 3 9 次の式を計算せよ。

(1) $(4\sqrt{2} + 3\sqrt{5})(2\sqrt{2} - \sqrt{5})$

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

(3) $(\sqrt{7} + \sqrt{3})^2$

(4) $(\sqrt{6} - 2)^2$

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

(6) $(3 - \sqrt{5})(3 + \sqrt{5})$