

2013年第1問

1 式 $(1 + \sqrt{3} - \sqrt{6} - \sqrt{8})(1 - \sqrt{3} + \sqrt{6} - \sqrt{8})$ を簡単にせよ.

$$\begin{aligned}(\text{与式}) &= \{(1 - \sqrt{8}) + (\sqrt{3} - \sqrt{6})\} \{(1 - \sqrt{8}) - (\sqrt{3} - \sqrt{6})\} \\ &= (1 - \sqrt{8})^2 - (\sqrt{3} - \sqrt{6})^2 \\ &= 1 + 8 - 2\sqrt{8} - (3 + 6 - 2\sqrt{18}) \\ &= -4\sqrt{2} + 6\sqrt{2} \\ &= \underline{\underline{2\sqrt{2}}}\end{aligned}$$