平方根の加減法２

NO.１　名前　　／8　点

1　次の式を簡単にしなさい。

① $\sqrt{18}-\sqrt{50}+\sqrt{8}$

② $\sqrt{27}-\sqrt{6}\times\sqrt{2}$

③ $\sqrt{8}-\sqrt{7}+\sqrt{2}+\sqrt{28}$

④ $\sqrt{6}\left(\sqrt{3}-\sqrt{2}\right)$

2　次の式を簡単にしなさい。

① $\dfrac{1}{\sqrt{2}}+\sqrt{8}$

② $\sqrt{27}-\dfrac{2}{\sqrt{3}}$

③ $\dfrac{1}{\sqrt{5}}+\dfrac{\sqrt{5}}{2}$

④ $\sqrt{50}-\dfrac{7}{\sqrt{2}}$

解答

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

$= 0$

② $3\sqrt{3} - 2\sqrt{3}$

$= \sqrt{3}$

③ $2\sqrt{2} - \sqrt{7} + \sqrt{2} + 2\sqrt{7}$

$= 3\sqrt{2} + \sqrt{7}$

④ $\sqrt{18} - \sqrt{12}$

$= 3\sqrt{2} - 2\sqrt{3}$

2 ① $\frac{\sqrt{2}}{2} + 2\sqrt{2}$

$= \frac{\sqrt{2}}{2} + \frac{4\sqrt{2}}{2} = \frac{5\sqrt{2}}{2}$

② $3\sqrt{3} - \frac{2\sqrt{3}}{3}$

$= \frac{9\sqrt{3}}{3} - \frac{2\sqrt{3}}{3} = \frac{7\sqrt{3}}{3}$

③ $\frac{\sqrt{5}}{5} + \frac{\sqrt{5}}{2}$

$\frac{2\sqrt{5}}{10} + \frac{5\sqrt{5}}{10} = \frac{7\sqrt{5}}{10}$

④ $5\sqrt{2} - \frac{7\sqrt{2}}{2}$

$= \frac{10\sqrt{2}}{2} - \frac{7\sqrt{2}}{2} = \frac{3\sqrt{2}}{2}$