

1 解答 (1)  $6\sqrt{2}$  (2)  $0$  (3)  $2\sqrt{6}$  (4)  $4\sqrt{3}$

$$\begin{aligned} (1) \quad \sqrt{32} + \frac{4}{\sqrt{2}} &= 4\sqrt{2} + \frac{4 \times \sqrt{2}}{\sqrt{2} \times \sqrt{2}} \\ &= 4\sqrt{2} + \frac{4\sqrt{2}}{2} \\ &= 4\sqrt{2} + 2\sqrt{2} \\ &= 6\sqrt{2} \end{aligned}$$

$$\begin{aligned} (2) \quad \frac{12}{\sqrt{3}} - \sqrt{48} &= \frac{12 \times \sqrt{3}}{\sqrt{3} \times \sqrt{3}} - 4\sqrt{3} \\ &= \frac{12\sqrt{3}}{3} - 4\sqrt{3} \\ &= 4\sqrt{3} - 4\sqrt{3} \\ &= 0 \end{aligned}$$

$$\begin{aligned} (3) \quad \frac{\sqrt{54}}{2} + \sqrt{\frac{3}{2}} &= \frac{3\sqrt{6}}{2} + \frac{\sqrt{3}}{\sqrt{2}} \\ &= \frac{3\sqrt{6}}{2} + \frac{\sqrt{3} \times \sqrt{2}}{\sqrt{2} \times \sqrt{2}} \\ &= \frac{3\sqrt{6}}{2} + \frac{\sqrt{6}}{2} \\ &= 2\sqrt{6} \end{aligned}$$

$$\begin{aligned} (4) \quad 3\sqrt{12} - \frac{15}{\sqrt{3}} + \sqrt{27} &= 3 \times 2\sqrt{3} - \frac{15 \times \sqrt{3}}{\sqrt{3} \times \sqrt{3}} + 3\sqrt{3} \\ &= 6\sqrt{3} - \frac{15\sqrt{3}}{3} + 3\sqrt{3} \\ &= 6\sqrt{3} - 5\sqrt{3} + 3\sqrt{3} \\ &= 4\sqrt{3} \end{aligned}$$

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

$$\begin{aligned} (1) \quad \frac{8}{\sqrt{2}} + \sqrt{8} &= \frac{8 \times \sqrt{2}}{\sqrt{2} \times \sqrt{2}} + 2\sqrt{2} \\ &= 4\sqrt{2} + 2\sqrt{2} \\ &= 6\sqrt{2} \end{aligned}$$

$$\begin{aligned} (2) \quad \sqrt{48} - \frac{15}{\sqrt{3}} &= 4\sqrt{3} - \frac{15 \times \sqrt{3}}{\sqrt{3} \times \sqrt{3}} \\ &= 4\sqrt{3} - 5\sqrt{3} \\ &= -\sqrt{3} \end{aligned}$$

$$\begin{aligned} (3) \quad \sqrt{\frac{2}{3}} + \frac{4}{\sqrt{6}} &= \frac{\sqrt{2}}{\sqrt{3}} + \frac{4}{\sqrt{6}} \\ &= \frac{\sqrt{2} \times \sqrt{3}}{\sqrt{3} \times \sqrt{3}} + \frac{4 \times \sqrt{6}}{\sqrt{6} \times \sqrt{6}} \\ &= \frac{\sqrt{6}}{3} + \frac{2\sqrt{6}}{3} \\ &= \sqrt{6} \end{aligned}$$

$$\begin{aligned} (4) \quad \frac{24}{\sqrt{6}} - 3\sqrt{6} + \frac{15\sqrt{2}}{\sqrt{3}} &= \frac{24 \times \sqrt{6}}{\sqrt{6} \times \sqrt{6}} - 3\sqrt{6} + \frac{15\sqrt{2} \times \sqrt{3}}{\sqrt{3} \times \sqrt{3}} \\ &= 4\sqrt{6} - 3\sqrt{6} + 5\sqrt{6} \\ &= 6\sqrt{6} \end{aligned}$$