

Adding / Subtracting Radicals

$$\textcircled{1} \quad -\sqrt{45} - \sqrt{45}$$
$$\begin{array}{cc} \wedge & \wedge \\ 9 & 9 \end{array}$$

$$\textcircled{2} \quad 4\sqrt{3} + 2\sqrt{3} - 2\sqrt{5}$$
$$= \boxed{6\sqrt{3} - 2\sqrt{5}}$$

$$-3\sqrt{5} - 3\sqrt{5}$$
$$= \boxed{-6\sqrt{5}}$$

$$\textcircled{3} \quad -3\sqrt{5} - 2\sqrt{45}$$
$$\begin{array}{c} \downarrow 9 \wedge \\ -3\sqrt{5} - 2 \cdot 3\sqrt{5} \\ -3\sqrt{5} - 6\sqrt{5} \\ = \boxed{-9\sqrt{5}} \end{array}$$

$$\textcircled{4} \quad 3\sqrt{18} + 2\sqrt{2}$$
$$\begin{array}{c} \downarrow 9 \wedge \\ 3 \cdot 3\sqrt{2} + 2\sqrt{2} \\ 9\sqrt{2} + 2\sqrt{2} \\ = \boxed{11\sqrt{2}} \end{array}$$

$$\textcircled{5} \quad -3\sqrt{8} + 2\sqrt{18}$$
$$\begin{array}{cc} \wedge & \wedge \\ 4 & 9 \\ 2 & 2 \end{array}$$
$$-3 \cdot 2\sqrt{2} + 2 \cdot 3\sqrt{2}$$
$$-6\sqrt{2} + 6\sqrt{2}$$
$$= \boxed{0}$$

$$\textcircled{6} \quad -\sqrt{20} - \sqrt{45} + 3\sqrt{54}$$
$$\begin{array}{ccc} \wedge & \wedge & \wedge \\ 4 & 9 & 9 \\ 5 & 5 & 6 \end{array}$$
$$-1 \cdot 2\sqrt{5} - 3\sqrt{5} + 3 \cdot 3\sqrt{6}$$
$$= -2\sqrt{5} - 3\sqrt{5} + 9\sqrt{6}$$
$$= \boxed{-5\sqrt{5} + 9\sqrt{6}}$$

$$\textcircled{7} \quad -2\sqrt{12} - \sqrt{24} - \sqrt{5} - 2\sqrt{6}$$
$$\begin{array}{cc} \wedge & \wedge \\ 4 & 4 \\ 3 & 6 \end{array}$$
$$-2 \cdot 2\sqrt{3} - 2\sqrt{6} - \sqrt{5} - 2\sqrt{6}$$
$$-4\sqrt{3} - 2\sqrt{6} - \sqrt{5} - 2\sqrt{6}$$
$$= \boxed{-4\sqrt{3} - 4\sqrt{6} - \sqrt{5}}$$