

P. 50

$$[4] \quad (1) \quad 8\sqrt{10} - \sqrt{50} \times 3\sqrt{2}$$

$$= 8\sqrt{10} - 5\sqrt{2} \times 3\sqrt{2}$$

$$= 8\sqrt{10} - 15 \times 2$$

$$= 8\sqrt{10} - 30$$

$$(3) \quad \frac{3\sqrt{10}}{\sqrt{90}} \div \frac{2\sqrt{6}}{\sqrt{24}} + \frac{3\sqrt{5}}{\sqrt{45}} \times \frac{2\sqrt{3}}{\sqrt{12}}$$

$$= \frac{3\sqrt{10} \sqrt{5}}{2\sqrt{6}\sqrt{3}} + \frac{1\sqrt{5} \times 2\sqrt{3}}{2}$$

$$= \frac{3\sqrt{5} \times \sqrt{3}}{2\sqrt{3} \times \sqrt{3}} + 2\sqrt{15}$$

$$= \frac{1\sqrt{15}}{2 \times 3} + 2\sqrt{15}$$

$$= \frac{\sqrt{15}}{2} + \frac{4\sqrt{15}}{2}$$

$$= \frac{5\sqrt{15}}{2}$$

$$(5) \quad \frac{7\sqrt{2}}{\sqrt{98}} - \sqrt{10} \div \sqrt{15} \times \frac{10\sqrt{3}}{\sqrt{300}}$$

$$= 7\sqrt{2} - \frac{\sqrt{10} \times 10\sqrt{3}}{\sqrt{15} \sqrt{3}}$$

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

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

$$(2) \quad 2\sqrt[2]{20} - 6\sqrt{10} \div \sqrt[2]{8}$$

$$= 4\sqrt{5} - \frac{3\sqrt{10}\sqrt{5}}{2\sqrt{2}}$$

$$= 4\sqrt{5} - 3\sqrt{5}$$

$$= \sqrt{5}$$

$$(4) \quad 3\sqrt[2]{12} + 6\sqrt[2]{24} \div 4\sqrt{2}$$

$$= 6\sqrt{3} + \frac{3\sqrt{8}\sqrt{3}}{4\sqrt{2}}$$

$$= 6\sqrt{3} + 3\sqrt{3}$$

$$= 9\sqrt{3}$$

$$(6) \quad \frac{3\sqrt{7}}{\sqrt{83}} \times 2\sqrt[2]{28} + 3\sqrt[4]{48} \div \sqrt[6]{108}$$

$$= 3\sqrt{7} \times 4\sqrt{7} + \frac{2\sqrt[2]{3}}{1\sqrt{3}}$$

$$= 12 \times 7 + 2$$

$$= 84 + 2$$

$$= 86$$