

1 解答 (1)  $\sqrt{35}$  (2) 9 (3)  $\sqrt{5}$  (4) 4

$$(1) \sqrt{5} \times \sqrt{7} = \sqrt{5 \times 7} = \sqrt{35}$$

$$(3) \sqrt{15} \div \sqrt{3} = \frac{\sqrt{15}}{\sqrt{3}}$$

$$= \sqrt{\frac{15}{3}}$$

$$= \sqrt{5}$$

$$(4) \sqrt{80} \div \sqrt{5} = \frac{\sqrt{80}}{\sqrt{5}}$$

$$= \sqrt{\frac{80}{5}}$$

$$= \sqrt{16}$$

$$= 4$$

2 解答 (1)  $7\sqrt{3}$  (2)  $6\sqrt{5}$  (3)  $12\sqrt{7}$  (4)  $18\sqrt{3}$  (5)  $30\sqrt{2}$

$$(1) \sqrt{7} \times \sqrt{21} = \sqrt{7 \times 21}$$

$$= \sqrt{7 \times 3 \times 7}$$

$$= \sqrt{7^2 \times 3}$$

$$= 7\sqrt{3}$$

$$(2) \sqrt{6} \times \sqrt{30} = \sqrt{6 \times 30}$$

$$= \sqrt{6 \times 5 \times 6}$$

$$= \sqrt{6^2 \times 5}$$

$$= 6\sqrt{5}$$

$$(3) \sqrt{24} \times \sqrt{42} = \sqrt{24 \times 42}$$

$$= \sqrt{2^3 \times 3 \times 2 \times 3 \times 7}$$

$$= \sqrt{(4 \times 3)^2 \times 7}$$

$$= 12\sqrt{7}$$

$$(4) \sqrt{18} \times \sqrt{54} = \sqrt{18 \times 54}$$

$$= \sqrt{2 \times 3^2 \times 2 \times 3^3}$$

$$= \sqrt{(2 \times 9)^2 \times 3}$$

$$= 18\sqrt{3}$$

$$(5) 2\sqrt{5} \times 3\sqrt{10} = 2 \times 3 \times \sqrt{5} \times \sqrt{10}$$

$$= 6\sqrt{50}$$

$$= 6 \times 5\sqrt{2}$$

$$= 30\sqrt{2}$$

3 解答 (1)  $24\sqrt{3}$  (2)  $-3\sqrt{6}$  (3)  $\frac{3\sqrt{5}}{5}$

$$(1) 2\sqrt{8} \times 3\sqrt{6} = 2 \times 3 \times \sqrt{8} \times \sqrt{6}$$

$$= 6\sqrt{48}$$

$$= 6 \times 4\sqrt{3}$$

$$= 24\sqrt{3}$$

$$(2) \sqrt{18} \times \sqrt{15} \div (-\sqrt{5}) = -\sqrt{\frac{18 \times 15}{5}}$$

$$= -\sqrt{18 \times 3}$$

$$= -\sqrt{3 \times 3 \times 6}$$

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

$$(3) \sqrt{3} \div \sqrt{10} \times \sqrt{6} = \sqrt{\frac{3 \times 6}{10}}$$

$$= \sqrt{\frac{9}{5}}$$

$$= \frac{3}{\sqrt{5}}$$

$$= \frac{3 \times \sqrt{5}}{\sqrt{5} \times \sqrt{5}}$$

$$= \frac{3\sqrt{5}}{5}$$