

根号の中の数を根号の外に出す

例題 次の数を $a\sqrt{b}$ の形で表しなさい。

(1) $\sqrt{32}$

(2) $3\sqrt{18}$

答

答

問題 次の数を $a\sqrt{b}$ の形で表しなさい。

(1) $\sqrt{8}$

(2) $\sqrt{12}$

(3) $2\sqrt{27}$

(4) $2\sqrt{54}$

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(5) $\sqrt{40}$

(6) $\sqrt{44}$

(7) $3\sqrt{80}$

(8) $4\sqrt{27}$

答

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(9) $\sqrt{54}$

(10) $\sqrt{63}$

(11) $2\sqrt{44}$

(12) $3\sqrt{32}$

答

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(13) $\sqrt{24}$

(14) $\sqrt{48}$

(15) $2\sqrt{54}$

(16) $2\sqrt{99}$

答

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例題 次の数を $a\sqrt{b}$ の形で表しなさい。

(1) $\sqrt{32}$

(2) $3\sqrt{18}$

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$$\sqrt{32} = \sqrt{4^2 \times 2} = 4\sqrt{2}$$

$$3\sqrt{18} = 3 \times \sqrt{9 \times 2} = 9\sqrt{2}$$

答 $4\sqrt{2}$

答 $9\sqrt{2}$

問題 次の数を $a\sqrt{b}$ の形で表しなさい。

(1) $\sqrt{8}$

(2) $\sqrt{12}$

(3) $2\sqrt{27}$

(4) $2\sqrt{54}$

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$$\sqrt{8} = \sqrt{2^2 \times 2} = 2\sqrt{2}$$

$$\sqrt{12} = \sqrt{2^2 \times 3} = 2\sqrt{3}$$

$$2\sqrt{27} = 2 \times 3\sqrt{3} = 6\sqrt{3}$$

$$2\sqrt{54} = 2 \times 3\sqrt{6} = 6\sqrt{6}$$

答 $2\sqrt{2}$

答 $2\sqrt{3}$

答 $6\sqrt{3}$

答 $6\sqrt{6}$

(5) $\sqrt{40}$

(6) $\sqrt{44}$

(7) $3\sqrt{80}$

(8) $4\sqrt{27}$

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$$\sqrt{40} = \sqrt{2^2 \times 10} = 2\sqrt{10}$$

$$\sqrt{44} = \sqrt{2^2 \times 11} = 2\sqrt{11}$$

$$3\sqrt{80} = 3 \times 4\sqrt{5} = 12\sqrt{5}$$

$$4\sqrt{27} = 4 \times 3\sqrt{3} = 12\sqrt{3}$$

答 $2\sqrt{10}$

答 $2\sqrt{11}$

答 $12\sqrt{5}$

答 $12\sqrt{3}$

(9) $\sqrt{54}$

(10) $\sqrt{63}$

(11) $2\sqrt{44}$

(12) $3\sqrt{32}$

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$$\sqrt{54} = \sqrt{3^2 \times 6} = 3\sqrt{6}$$

$$\sqrt{63} = \sqrt{3^2 \times 7} = 3\sqrt{7}$$

$$2\sqrt{44} = 2 \times 2\sqrt{11} = 4\sqrt{11}$$

$$3\sqrt{32} = 3 \times 4\sqrt{2} = 12\sqrt{2}$$

答 $3\sqrt{6}$

答 $3\sqrt{7}$

答 $4\sqrt{11}$

答 $12\sqrt{2}$

(13) $\sqrt{24}$

(14) $\sqrt{48}$

(15) $2\sqrt{54}$

(16) $2\sqrt{99}$

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$$\sqrt{24} = \sqrt{2^2 \times 2 \times 3} = 2\sqrt{6}$$

$$\sqrt{48} = \sqrt{4^2 \times 3} = 4\sqrt{3}$$

$$2\sqrt{54} = 2 \times 3\sqrt{6} = 6\sqrt{6}$$

$$2\sqrt{99} = 2 \times 3\sqrt{11} = 6\sqrt{11}$$

答 $2\sqrt{6}$

答 $4\sqrt{3}$

答 $6\sqrt{6}$

答 $6\sqrt{11}$