

平方根と(分母の有理化, まとめの問題) 練習

1. 次の数を変形して, $a\sqrt{b}$ の形に直せ.

- | | | | |
|------------------|-------------------|-------------------|-------------------|
| (1) $\sqrt{8}$ | (2) $\sqrt{12}$ | (3) $\sqrt{20}$ | (4) $\sqrt{24}$ |
| (5) $\sqrt{18}$ | (6) $\sqrt{27}$ | (7) $\sqrt{45}$ | (8) $\sqrt{54}$ |
| (9) $\sqrt{32}$ | (10) $\sqrt{48}$ | (11) $\sqrt{80}$ | (12) $\sqrt{96}$ |
| (13) $\sqrt{50}$ | (14) $\sqrt{75}$ | (15) $\sqrt{125}$ | (16) $\sqrt{150}$ |
| (17) $\sqrt{72}$ | (18) $\sqrt{108}$ | (19) $\sqrt{98}$ | (20) $\sqrt{128}$ |

2. 次の数の分母を有理化せよ.

- | | | | |
|---------------------------|-----------------------------------|----------------------------|--|
| (1) $\frac{1}{\sqrt{2}}$ | (2) $\frac{1}{\sqrt{3}}$ | (3) $\frac{1}{\sqrt{5}}$ | (4) $\frac{1}{\sqrt{6}}$ |
| (5) $\frac{2}{\sqrt{7}}$ | (6) $\frac{3}{\sqrt{10}}$ | (7) $\frac{10}{\sqrt{11}}$ | (8) $\frac{7}{\sqrt{13}}$ |
| (9) $\frac{3}{\sqrt{3}}$ | (10) $\frac{5}{\sqrt{5}}$ | (11) $\frac{12}{\sqrt{6}}$ | (12) $\frac{21}{\sqrt{7}}$ |
| (13) $\frac{4}{\sqrt{2}}$ | (14) $\frac{\sqrt{2}}{3\sqrt{5}}$ | (15) $\frac{4}{3\sqrt{2}}$ | (16) $\frac{\sqrt{6}-\sqrt{2}}{2\sqrt{3}}$ |

3. 次の計算をしなさい.

- | | | |
|---|--|---|
| (1) $\sqrt{2} + \frac{1}{\sqrt{2}}$ | (2) $\sqrt{3} + \frac{2}{\sqrt{3}}$ | (3) $\sqrt{48} - \frac{9}{\sqrt{3}}$ |
| (4) $\sqrt{2} - \frac{1}{\sqrt{8}}$ | (5) $\sqrt{18} - \frac{4}{\sqrt{2}}$ | (6) $\sqrt{45} - \frac{25}{\sqrt{5}}$ |
| (7) $\frac{\sqrt{3}}{2} - \frac{2}{\sqrt{3}}$ | (8) $\frac{\sqrt{3}}{5} + \frac{5}{\sqrt{3}}$ | (9) $\frac{\sqrt{2}}{3} - \frac{3}{\sqrt{2}}$ |
| (10) $\sqrt{27} + \frac{6}{\sqrt{3}} - \sqrt{27} \div \sqrt{6}$ | (11) $\frac{\sqrt{20}}{\sqrt{3}} - \sqrt{60} + \frac{3\sqrt{3}}{\sqrt{5}}$ | |