

DIRECTIONS: Write in exponential form.

1. $\sqrt{a^{-2}b^3}$

2. $\sqrt[3]{x^6y^{-4}}$

3. $(\sqrt{a^{-2}b})^5$

4. $\sqrt[3]{8b^6c^{-4}}$

5. $\sqrt[4]{\frac{(16^3)(a^{-2})}{b^6}}$

6. $\frac{1}{\sqrt[4]{p^4q^{-8}}}$

DIRECTIONS: Express in simplest radical form.

7. $(\sqrt{8})(\sqrt[6]{8})$

8. $\frac{\sqrt[3]{4}}{\sqrt[6]{2}}$

9. $\frac{\sqrt[5]{27^3}}{\sqrt[5]{9^2}}$

10. $\sqrt[6]{8^3} \div \sqrt[6]{4^2}$

11. $\sqrt[4]{27} \cdot \sqrt[8]{9}$

12. $\sqrt[4]{128} \cdot \sqrt[8]{256}$

DIRECTIONS: Simplify each expression. Give answers in exponential form.

13. $\sqrt[3]{a^2} \cdot \sqrt[3]{a^4}$

14. $\sqrt[4]{x} \cdot \sqrt[6]{x} \div \sqrt[3]{x}$

15. $((b^{\frac{1}{2}})^{\frac{-2}{3}})^{\frac{3}{4}}$

16. $a^{\frac{1}{2}}(a^{\frac{3}{2}} - 2a^{\frac{1}{2}})$