

Properties of Exponents: Day 5

Unit 1: Extending the Number System

Emphasis on the properties and rational exponents.

1. $\frac{n}{n^{-\frac{7}{4}} \cdot m^{-\frac{1}{3}} n^{-1}}$	2. $\frac{yx^{\frac{3}{4}} \cdot x^{-1}}{\left(x^{\frac{2}{3}} y^{-1}\right)^{-2}}$
3. $\frac{b^{-\frac{1}{2}} \cdot a^{-\frac{1}{2}} b^{\frac{1}{2}}}{b^{-\frac{2}{3}}}$	4. $\frac{x^{-1} y^{\frac{5}{3}}}{\left(x^{\frac{1}{4}} y^{\frac{1}{3}} \cdot x^{-\frac{3}{2}} y^{\frac{7}{4}}\right)^{\frac{2}{3}}}$
5. $\left(\frac{uv}{v^{\frac{1}{2}} \cdot u^{-\frac{7}{4}} v^{\frac{3}{2}}}\right)^{-\frac{1}{2}}$	6. $\frac{ab^2}{\left(ab^{\frac{7}{4}} \cdot a^{-\frac{4}{3}}\right)^{-\frac{1}{2}}}$
7. $\left(\frac{x^{-2} y^{-\frac{5}{4}}}{y \cdot x^{\frac{1}{2}} y^2}\right)^{\frac{3}{2}}$	8. $\frac{\left(y^{-\frac{2}{3}}\right)^{\frac{1}{3}} \cdot xy^{\frac{5}{4}} \cdot x^2}{\left(x^{-\frac{1}{3}} y^{\frac{1}{3}}\right)^{\frac{1}{2}}}$

$$9. \frac{y^{\frac{1}{4}} \cdot \left(x^{-\frac{3}{2}} y^2\right)^{-\frac{1}{2}} \cdot y^{-2}}{x^{\frac{2}{3}} y^{\frac{4}{3}}}$$

$$10. \left(\frac{mn \cdot m^{-\frac{3}{4}} n^{-2}}{m^{-\frac{7}{4}} n^{-\frac{7}{4}}}\right)^{\frac{3}{2}}$$

$$11. \left(\frac{u^{-1} v^{\frac{1}{2}}}{u^{-\frac{2}{3}} v^{\frac{3}{2}} \cdot u^{-\frac{1}{2}}}\right)^{\frac{1}{2}}$$

$$12. \frac{(x^2)^{\frac{3}{2}} \cdot x^{-1} y^{-\frac{3}{2}}}{x^{-3}}$$

$$13. \frac{\left(y^{\frac{7}{4}}\right)^{-4}}{x y^{-1} \cdot x^{-1} y^{-\frac{4}{3}}}$$

$$14. \frac{v^2}{u^{-2} \cdot u v^{\frac{3}{2}}}$$

$$15. \frac{\left(x^{\frac{1}{3}} \cdot \left(x^2 y^{\frac{1}{2}}\right)^{\frac{5}{4}}\right)^{-\frac{4}{3}}}{\left(x^{-\frac{1}{2}} y^{-2}\right)^{-\frac{1}{3}}}$$

$$16. \frac{x^{\frac{5}{3}} y^{\frac{1}{2}}}{x^{\frac{4}{3}} y^{-2} \cdot \left(x^{\frac{1}{2}} y^{\frac{5}{3}}\right)^{-\frac{7}{4}} \cdot x^{-1} y^{\frac{5}{3}}}$$