

Properties of Exponents: Day 6

Unit 1: Extending the Number System

Emphasis on the properties and rational exponents.

1. $\frac{n}{n^{-\frac{5}{2}} \cdot m^{\frac{2}{3}} n^{-3}}$	2. $\frac{y^{-1} x^{-\frac{1}{3}} \cdot x^8}{\left(x^{\frac{1}{7}} y^{-2}\right)^{-3}}$
3. $\frac{b^{\frac{7}{8}} \cdot a^{\frac{1}{2}} b^{-\frac{1}{2}}}{b^{-\frac{4}{3}}}$	4. $\frac{x^{-8} y^{\frac{3}{5}}}{\left(x^{\frac{1}{9}} y^{\frac{3}{2}} \cdot x^{\frac{3}{2}} y^{\frac{6}{5}}\right)^{\frac{2}{3}}}$
5. $\left(\frac{uv}{v^{\frac{1}{2}} \cdot u^{-\frac{7}{4}} v^{\frac{3}{2}}}\right)^{-\frac{2}{3}}$	6. $\frac{ab^{-2}}{\left(ab^{\frac{3}{7}} \cdot a^{\frac{1}{4}}\right)^{-\frac{2}{5}}}$
7. $\left(\frac{x^{-2} y^{-\frac{5}{4}}}{y \cdot x^{\frac{1}{2}} y^2}\right)^{-\frac{3}{2}}$	8. $\frac{\left(y^{\frac{2}{3}}\right)^{-\frac{1}{5}} \cdot xy^{\frac{2}{3}} \cdot x^2}{\left(x^{\frac{1}{3}} y^{-\frac{1}{3}}\right)^{\frac{-1}{2}}}$

$$9. \frac{y^{-\frac{1}{4}} \cdot \left(x^{-\frac{5}{2}} y^3\right)^{\frac{1}{2}} \cdot y^2}{x^{\frac{2}{5}} y^{\frac{2}{3}}}$$

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

$$11. \left(\frac{u^6 v^{\frac{4}{3}}}{u^{-\frac{1}{3}} v^{\frac{-3}{2}} \cdot u^{-\frac{3}{2}}}\right)^{\frac{1}{2}}$$

$$12. \frac{(x^2)^{-\frac{3}{2}} \cdot x^{-7} y^{\frac{3}{2}}}{x^3}$$

$$13. \frac{\left(y^{\frac{7}{4}}\right)^4}{xy^{-5} \cdot x^3 y^{\frac{4}{3}}}$$

$$14. \frac{v^2}{u^9 \cdot uv^{-\frac{3}{2}}}$$

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

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