

## Properties of Exponents: Day 7

### Unit 1: Extending the Number System

Emphasis on the properties and rational exponents.

1. $\frac{a^3(a^{-2}b^4)^{-1}}{a^5b^{-5}}$	2. $\frac{a^{3/2}(a^{-7/4}b^{4/3})^{-1/2}}{a^{5/3}b^{-4/5}}$
3. $\frac{(x^2y^{-9}x^{-4}y^2)^3}{(x^{-4}y^3)^{-4}}$	4. $\frac{(x^{2/3}y^{-1/9}x^{4/3}y^{1/2})^{5/3}}{(x^{-4/7}y^{5/3})^{-1/4}}$
5. $m^2n^{-1}m^8n^{-8}m^{-4}n^{10}$	6. $m^{2/9}n^{-1/3}m^{8/5}n^{-8/3}$
7. $\left(\frac{r^2s^{-2}t^5}{r^{-3}s^2}\right)^{-3}$	8. $\left(\frac{r^{2/5}s^{-2/3}t^{5/2}}{r^{-1/3}s^{2/5}}\right)^{-3/2}$

9.  $m^5 n^0 m^0 n^3$

10.  $m^{2/5} n^{0/2} m^{0/4} n^{-3/5}$

11. 
$$\frac{(a^{-4} b^{-2} b^{-9} a^{-6})^{-3}}{a^5 b^{12}}$$

12. 
$$\frac{(a^{-4/3} b^{-2/9} b^{-9/2} a^{-6})^{-1/3}}{a^{5/3} b^{12/11}}$$

13.  $(a^3 b^{-5} c^{-10} a^{-45} b^{35} c^{-8} abc^3)^0$

14.  $(a^{3/2} b^{-5/7} c^{-10/3} a^{-45/2} b^{35/2})^0$

15. 
$$\frac{(m^{14} n^{23})}{(m^{-3} n^{-8} m^{-15} n^3)^{-8}}$$

16. 
$$\frac{(m^{14/9} n^{23/2})}{(m^{-3/7} n^{-8/3} m^{-15} n^3)^{-8/7}}$$