

Properties of Exponents B (Power of Powers)

Name: _____

Period _____

Directions: Simplify each expression so that the exponents are positive.

1. $(a^5b^2)^3$

2. $(cd^{-2}e^3)^4$

3. $(f^{-3}g^5)^{-2}$

4. $\left(\frac{k^{-3}}{h}\right)^{-4}$

Directions: Simplify each expression so that the exponents are positive. Show your work.

5. $(a^2b^3c)^2(a^4b^5c^2)$

6. $\frac{(d^{-3}e^2)^3}{(d^2e^4)}$

7. $(f^3g^{-5})(f^3g^2)^2$

8. $\frac{(h^4k^{-3})}{(h^{-2}k^{-4})^2}$

9. $(3m^2n^{-4}p^{-3})^3(5m^4n^{-2}p^4)$

10. $\frac{(4q^3r^5)^2}{(2q^{-3}r)}$