Worksheet 4.4 Exponents Name: _____ No. _____

Rule #5: Power to a power rule $(a^m)^n = a^{m \times n}$		
1. $(2^3)^4 =$	2. $(3^{-2})^{-1} =$	3. $(x^4)^5 =$
4. $(7^8)^5 =$	5. $(4^2)^{-3} =$	6. $(y^6)^{-1} =$
Rule # 6: Product to a power rule $(ab)^n = a^n b^n$		
7. $(xy^2)^3 =$	8. $(p^2qr^{-1})^2 =$	9. $(a^4bc)^{-2} =$
10. $(m^2n^4)^3 =$	11. $(d^3f^5g)^{-2} =$	12. $(b^{-2}c^{-3})^{-1} =$
Rule #7:Quotient to a power rule $\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n}$		
13. $\left(\frac{x}{y}\right)^2$	14. $\left(\frac{p^2q^3}{r^2}\right)^3$	15. $\left(\frac{x}{x^2}\right)^3$