



Name _____ Period _____ Date _____

Raising a Power to a Power

Power Rule: $(A^m)^n = A^{mn}$

Example:

Simplify $(9^4)^4$ in exponential notation.

$$(9^4)^4 = 9^{4 \times 4},$$
$$= 9^{16}.$$

Simplify the following expressions in exponential notation.

1. $(6^7)^2$

2. $(12^0)^4$

3. $(48^3)^5$

4. $(2^6)^6$

5. $(8^2)^3$

6. $(3^{10})^8$

7. $(25^2)^{13}$

8. $(11^5)^9$

9. $(8^4)^3$

10. $(14^{15})^3$

11. $(7^7)^4$

12. $(10^8)^0$