

NAME: _____

EXPONENTS WITH EXPONENTS

In the blank provided, describe each step used to simplify the expression.

$(-4xy^2)^3$

$(-4)^3(x)^3(y^2)^3$ _____

$(-64)(x^3)(y^6)$ _____

Determine whether each problem was simplified correctly. If there it was not simplified correctly, describe the mistake and correct it.

2. $(2x^4y^2)^5$

$(2)(x^4)^5(y^2)^5$

$2x^{20}y^{10}$

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

$(5)^3(a^3)^3(b^5)^3$

$15a^9b^{15}$

4. $(-3xy^5)^2$

$(-3)^2(x)^2(y^5)^2$

$-9x^2y^{10}$

5. $(5x^7w)^2$

$(5)(7)(2)xw$

$70xw$

6. $(-6d^2t)^5$

$(-6)^5(d^2)^5(t)^5$

$-7776d^7t^6$

7. $(-4g^2h)^3$

$(-4)^3(g^2)^3(h)^3$

$64g^6h^3$

Simplify each expression.

8. $(2x^6)^3$

9. $(-4xy)^4$

10. $(2x^6)^3$

11. $(-4xy)^4$

12. $(2x^6)^3$

13. $(-4xy)^4$

14. $(2x^6)^3$

15. $(-4xy)^4$

