Simplify.

1) $(3ab^2)^3$ $= 3^3a^3b^6$

$= 27a^3b^6$

2) $3x^2y^3 \cdot -2xy^2y^4$

$= -6x^3y^9$

3) $(2x^2y)^2(-xy^2)$ $2^2x^4y^2(-1)xy^2$

$-4x^5y^4$

Homework Questions?

Example 4: Use All Three Properties

Simplify the expression $(7z^3)^2 \bullet z^4$.

$(7z^3)^2 \bullet z^4 =$

$7^2 z^6 \cdot z^4$

$49z^{10}$

Try It Simplify the expression.

7) $(-4x^2y^2)^2 =$

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

$16x^4y^4$

8) $(6p)^2 = 6^2 p^2$

$36p^2$

9) $(-2xy)^4 =$

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

$16x^4y^4$

10) $(3a^2)^3 = 3^3 a^6$

$= 27a^6$

11) $(x^5)^3 \bullet x^7 =$

$x^{15} x^7 = x^{22}$

12) $(2wz^2)^5 (wz)^2 =$

$2^5 w^5 z^{10} w^2 z^2$

3

Summary

EQ:

Write an example when you **Add** the exponents, then when you would **Multiply** the exponents.

Adding Exponents: $x^2x = x^3$ $4^3 4^5 = 4^8$

Multiply Exponents: $(x^2)^4 = x^8$

8.1 Homework

Finish p.31 wkst
Then finish p.32 *Due @ End of Hr

8.1 p.446 #4-44even

(Due Tomorrow)