

Intermediate Algebra

5-1

Laws of Exponents

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1) $\frac{x^9}{x^5} =$ _____

2) $x^1 =$ _____

3) $(x^3)^5 =$ _____

4) $\frac{x^2}{x^7} =$ _____

5) $x^5 \cdot x^2 =$ _____

6) $x^0 =$ _____

7) $x^{-1} =$ _____

8) $3^{-2} =$ _____

1) When multiplying, _____ the powers.

2) When dividing, _____ the powers.

3) When the power is outside the parentheses, _____ the powers.

4) A negative power means _____.

Simplify.

$$2) (-2ab^4)(-3a^2b^4)$$

$$8) (2^2a^2b^3)^3$$

$$10) (xy)(x^2y)^4$$

$$18) [(3x^2y^3)^2]^2$$

$$22) y^{2n} \cdot y^{4n+1}$$

$$36) (4ab)^2(-2ab^2c^3)^3$$

$$42) \frac{2x^{-2}}{y^4}$$

$$54) \frac{x^{-2}y^{-11}}{xy^{-2}}$$

Assignment: pg 249 1-65 odd
