Math Study Strategies

Exponent Rules

To **raise a number or a letter to a power** means to multiply the number or letter by itself as many times as the exponent shows. The number or letter is called the **base** and the power is called the **exponent.**

Ex: $2^3 = 8$ where 2 is the base and 3 is the exponent

- Only **like terms** can be added or subtracted.
  Combine (add or subtract) the coefficients and keep the variable and exponent.

$$2x^2 + 3x^2 = 5x^2$$

- **To multiply** two or more numbers or letters with the same base but different exponents, keep the base and add the exponents.

$$x^3x^2 = x^{2+3} = x^5$$

Ex:

- **To divide** two or more letters or numbers with the same base but different exponents, keep the base and subtract the exponents.

$$\frac{x^4}{x^2} = x^{4-2} = x^2$$

- **The product of two or more numbers raised to a power** is equal with the product of the powers.

$$(2xy)^3 = 2^3x^3y^3 = 8x^3y^3$$

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