

The Distributive Property Guide Notes

DISTRIBUTIVE PROPERTY

For any numbers a , b , and c , the product of a and $(b + c)$ is:

For any numbers a , b , and c , the product of a and $(b - c)$ is:

Sample Problem 1: Rewrite using the distributive property, then evaluate.

- a. $8(10 + 4)$
- b. $(5 + 7)12$
- c. $5(100 - 72)$
- d. $\left(2 + \frac{1}{5}\right)35$
- e. $(10 + 7)5$

TERM is a number, a variable or a product or quotient of numbers and variables.

LIKE TERMS are terms that contain the same variables, with corresponding variables having the same power.

SIMPLIFYING EXPRESSIONS:

Distributive property is used to combine like terms by adding their coefficients. A simplified expression must not have grouping symbols and fractions are reduced to its lowest term.

Sample Problem 2: Simplify.

- a. $18x + 3x$
- b. $5x^2 + 2 - x^2$
- c. $3 - 2(4 + x)$
- d. $-3(2x^2 + 4x - 1) + 5x$
- e. $5(x - 7y) + 8(3x + 2y)$

Sample Problem 3: Manny runs a restaurant. One day, a total of 50 steaks are sold. Each steak cost \$14.95 and received an average tip of \$1 for each. Write the expression that determines the total amount he earned. How much did Manny earned?