**DISTRIBUTIVE PROPERTY**

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| *For any numbers* $a$*,*$ b$*,* *and* $c$*, the product of* $a$ *and* $\left(b+c\right)$*is:* |
|  |  |
| *For any numbers* $a$*,*$ b$*,* *and* $c$*, the product of* $a$ *and* $\left(b-c\right)$*is:* |
|  |  |

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

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|  | $$8\left(10+4\right)$$ |
|  | $$\left(5+7\right)12$$ |
|  | $$5\left(100-72\right)$$ |
|  | $$\left(2+\frac{1}{5}\right)35$$ |
|  | $$\left(10+7\right)5$$ |

**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.

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|  | $$18x+3x$$ |
|  | $$5x^{2}+2-x^{2}$$ |
|  | $$3-2\left(4+x\right)$$ |
|  | $$-3\left(2x^{2}+4x-1\right)+5x$$ |
|  | $$5\left(x-7y\right)+8\left(3x+2y\right)$$ |

**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?