Name_____ Date _____

Mr. Tallman

Lesson #50 – **Combining Like Terms**

If I have 2 pencils i and, how many pencils do I have? 5 pencils

If there are 8 apples in one basket and 12 apples in another basket, how many apples are there in all? 8+12 20 apples

If there are 6 bananas in one basket and 3 mangos in another basket, can I combine them to make 9 banan-gos? No. Why or why not? They are not the same fruit.

In Math, we can only combine things that are "Like Terms".

Like Terms have the same variable and same exponent, but can have different coefficients.

Directions: Identify the coefficient, base and exponent for the following terms.

	Coefficient	Base	Exponent
1) $5x^2$	5	x	2
2) $-3y^6$	-3	y	6
3) $10x$	10	x	1
4) -9	eq -9		
6) $25r^4$	25	r	4

Directions: Circle the like terms.

6) -6x, 7, 2x, $9x^2$, 3x

7) 2y, 2x, 6, 0, $2y^2$

8) 19x, $7x^2$, 2y, x^2, $3x^2$

9) 2y, 4x, 10, y, $2y^2$

10) $5x^3y$, $4x^3$, 7y, 7xy, $-2x^3y$

Simplify the following expressions by combining like terms.

11) $8y + 4y$ 12y	12) $3x + 8y + 4x$ 7x+8y	13) $-7a^2 - 16 + 10a^2$ $3a^2 - 16$
14) $3y^2 - 4y^2$ $-1y^2$	15) $7rs - 5rs$ 2rs	16) $8r^5y^2 - 4r^5y^2$ $4r^5y^2$

17) James simplified the expression $4x^3 - 3x^2$ and said it equals $1x^2$. Is he right or wrong? Explain.

She is incorrect. $4x^3$ and $3x^2$ are not like terms.

Now You Try! Simplify the following expressions by combining like terms.

1) $18 - 13r + 5 + 7r$ $23 - 6r$	2) $-2 + 11 + 15m + 13m$ $9 + 28m$	3) $4 - 17c + 8c$ $4 - 9c$
4) $6s + s$ $7s$	5) $14z + 10 - 6z - 12$ $8z - 2$	6) $b + 3b$ $4b$
7) $-10 + 8d + 15d - 14$ $-24 + 28d$	8) $18x - 17x$ $2x \quad 1x$	9) $10p - 6 - 2p$ $8p - 6$
10) $7z + 16 + 14z$ $21z + 16$	11) $2x^2 - 4 + 7x^2$ $9x^2 - 4$	12) $-5xy^3 + 16 - 9xy^3$ $-14xy^3 + 16$