M9 - 5.2 - Combining Like Terms Notes

Adding and Subtracting Like Terms:

$x + x = \boxed{2x}$ $3y + 2y = \boxed{5y}$ $x^2 + x^2 = \boxed{2x^2}$ $-9xy + 7xy = \boxed{-2xy}$

> Add/Subtract Coefficients.

Combine Like Terms

$2 + x + 3 =$
$x + 2 + 3$ Rearrange Order of Terms

$\boxed{x + 5}$ Combine Like Terms

$3x + 1 - x =$
$3x - x + 1$ Rearrange Coefficient!

$\boxed{2x + 1}$ Combine

Subtract Coefficients

$\boxed{3x - 1x = 2x}$

$3 - 1 = 2$

$3 + x^2 + 2x - 1 + 3x^2 + x =$
$x^2 + 3x^2 + 2x + x + 3 - 1$ Rearrange Order of Terms

    Combine Like Terms

$\boxed{4x^2 + 3x + 2}$

> Highest to Lowest Degree
> ie. $x^2 + \#x + \#\,...$

$\boxed{x + 3x^2 = 4x^2 \qquad -2x + x = -1x \qquad 3 - 1 = 2}$

Combine Like Terms

$5 - x + 2 =$ Circle Like Terms   Remember to Circle the Sign!

$\boxed{7 - x}$ $5 + 2 = 7$

$2x - 3 + 3x =$ Do like term addition and subtraction off to the right.

$\boxed{5x - 3}$ $2x + 3x = 5x \qquad 2 + 3 = 5$

    Add Coefficients

$-2x + 3 - x =$

$\boxed{-3x + 3}$

$-2x - x = -3x$
$-2 - 1 = -3$

$5x - 2 - 2x + 3 =$ Square Like Terms

$\boxed{3x + 1}$

$5 - 2 = 3$
$5x - 2x = 3x$

$-3 - 2x + 1 + 6x =$

$\boxed{4x - 2}$

$-2x + 6x = 4x$
$-2 + 6 = 4$

$x^2 + 3x - 2x^2 - 1 - 2x =$

$x^2 + 3x - 2x^2 - 1 - 2x$ Cloud Like Terms

$\boxed{-x^2 + x - 1}$

$x^2 - 2x^2 = -x^2$
$1 - 2 = -1$

$3x - 2x = 1x$
$3 - 2 = 1$

$-1 = -1$

> Remember to cross off terms you have dealt with.

$5xy + 2yx = 7xy$
$5 + 2 = 7$ $xy = yx$ They are the same $x^2y^3 = y^3x^2$ $3x^2y^3 - 5y^3x^2 = -2x^2y^3$
$3 - 5 = -2$