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RECOGNIZED
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Seatwork: Adding and Subtracting Polynomials

Like terms   - whose variables (and their exponents) are the same.

Example:

1) $2xy^2$, $-4xy^2$ - They are similar because they have both xy^2 .

2) y^2z , $-9yz^2$ -They are not similar.

3) $\frac{1}{3}a^2t^5$, $3t^5a^2$ - they are similar.

Direction: Identify if the following terms are like terms or not. Write _like_ if they are like terms and _not_ if they are not.

1) $4xy$, $2x^2y$ -

2) $-\frac{1}{2}yx^3$, $2x^3y$ -

3) $-6m^4y$, $3y^4m$ -

4) $\frac{5}{r^2s^4}$, $-3r^2s^4$ -

5) 8fgr , -12rfg   -

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Adding Polynomials

In adding polynomials, we only add terms which are alike.

Example:

$(2xy^2 + 3x^2y) + (-4xy^2 + 5x^2y)$	Given
$(2xy^2 + 3x^2y) + (-4xy^2 + 5x^2y)$	Like terms: $2xy^2$ and $-4xy^2$ $3x^2y$ and $5x^2y$
$[2xy^2 + (-4xy^2)] + [3x^2y + 5x^2y]$	Combine like terms.
$(2 + (-4))xy^2 + (3 + 5)x^2y$	Add only the numerical coefficients of those who were like terms, then copy their variables(and the exponent).
$-2xy^2 + 8x^2y$	Sum

Direction: Add as indicated.

1) $(x^3 + x^2 + 7x - 14) + (18x^3 + 20) =$

	Given
	Like terms:
	Combine like terms.
	Add only the numerical coefficients of those who were like terms, then copy their variables(and the exponent).
	Sum

2) $(-12m^6 - 9m^4 + 15m^2) + (4m^6 + 5m - 25) =$

3) $(17d^3 - 2d^2 + 15) + (-12d^3 + 9d^2 + d - 18) =$

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Subtracting Polynomials

In subtracting polynomials, change subtraction into addition then change the sign/s of the subtrahend then proceed in adding polynomials.

Example:

$(2xy^2 + 3x^2y) - (-4xy^2 + 5x^2y)$	Given
$(2xy^2 + 2x^2y) + (4xy^2 - 5x^2y)$	Change: - > + $-4xy^2$ > $4xy^2$ $5x^2y$ > $-5x^2y$
$(2xy^2 + 3x^2y) + (4xy^2 - 5x^2y)$	Like terms: $2xy^2$ and $4xy^2$ $\qquad\qquad 3x^2y$ and $-5x^2y$
$[2xy^2 + 4xy^2] + [3x^2y + (-5x^2y)]$	Combine like terms.
$(2+4)xy^2 + (3+(-5)x^2y$	Add only the numerical coefficients of those who were like terms, then copy their variables(and the exponent).
$6xy^2 - 2x^2y$	Difference

Direction: Subtract as indicated.

1) $(x^3 + x^2 + 7x - 14) - (18x^3 + 20) =$

	Given
	Change:
	Like terms:
	Combine like terms.
	Add only the numerical coefficients of those who were like terms, then copy their variables(and the exponent).
	Difference

2) $(-12m^6 - 9m^4 + 15m^2) - (4m^6 + 5m - 25) =$

3) $(17d^3 - 2d^2 + 15) - (-12d^3 + 9d^2 + d - 18) =$