WARM UP

Combine like terms.

1. $2x + 5x = 7x$

2. $7y^2 - 3y^2 = 4y^2$

3. $w + 4w + 6 = 5w + 6$

Adding and Subtracting Polynomials

Clear Learning Targets

You will be able to identify and categorize polynomials by number of terms and degree.

You will be able to add and subtract polynomials.

Adding or Subtracting Polynomials

*When finding a sum or difference of polynomials, simply **group like terms** and then **combine like terms**.*

Remember, **like terms are terms with...*

identical variable endings.

Example #2: Find the sum.

$(2x^2 + 5x - 7) + (3 - 4x^2 + 6x)$

$2x^2 + -4x^2 + 5x + 6x - 7 + 3$

$-2x^2 + 11x - 4$

*Final answer is written in standard form!

You Try! Find the sum.

$(3y + y^3 - 5) + (4y^2 - 4y + 8)$

$y^3 + 4y^2 + 3y + -4y + -5 + 8$

$y^3 + 4y^2 - y + 3$

Example #3: Find the difference.

$(3 - 2x + 2x^2) - (4x - 5 + 3x^2)$

$3 - -5 - 2x - 4x + 2x^2 - 3x^2$

$8 - 6x - x^2$

$-x^2 - 6x + 8$

You Try! Find the difference.

$(7p + 4p^3 - 8) - (3p^2 + 2 - 9p)$

$4p^3 - 3p^2 + 7p - -9p - 8 - 2$

$4p^3 - 3p^2 + 16p - 10$

Exit Ticket

Simplify each polynomial expression.

$(4x + 5x^2) + (2x^2 + 3x)$

$(4x + 5x^2) - (2x^2 + 3x)$