

Example 4: If  $P(x) = -5x^2 + 2x - 8$ , find the following.

a.  $P(-1)$

b.  $P(3)$

### Addition with Polynomials

1<sup>st</sup>: Drop the parentheses.

2<sup>nd</sup>: Combine like terms (recall: like terms have the same variables raised to the same power).

3<sup>rd</sup>: Add the coefficient and keep the variables (& exponents) the same.

Example: Add  $(-3x^3 + 7x^2 + 3x - 4)$  and  $(3x^2 - 9x)$ .

$$= (-3x^3 + 7x^2 + 3x - 4) + (3x^2 - 9x)$$

$$= -3x^3 + 7x^2 + 3x^2 + 3x - 9x - 4$$

$$= -3x^3 + 10x^2 - 6x - 4$$

Example 5: Add.

a.  $(2x^2 - 3x + 1) + (4x^2 + 5x - 3)$

b.  $(8x^2y + 2x^2y^2 - 7xy^2) + (-3x^2y + 5x^2y^2 + 3xy^2)$