

Warm-Up Notes

MAT 100: ELEMENTARY ALGEBRA

Fall 2026

SECTION 6.1 ADD AND SUBTRACT POLYNOMIALS

Install — 10 minute lesson

Objectives of this Section

- Identify polynomials, monomials, binomials, and trinomials
- Determine the degree of polynomials
- Add and subtract monomials
- Add and subtract polynomials
- Evaluate a polynomial for a given value

Skills**Introduced in this section:**

- **POL.AS** — Adding-Subtracting Polynomials

Also practiced: EXP.CL (Combining Like Terms), NUM.EV (Evaluating Expressions), WRD.NM (Naming the model).

Lesson

Every term in a polynomial has a degree — add up the exponents on its variables. A polynomial's own degree is just its biggest term's degree. Once you can name a term's degree, adding and subtracting polynomials is nothing new: you're combining like terms, a move you already have, just with a minus sign to distribute carefully first.

I do

Watch. Determine the degree of the polynomial: $z^2 - 5z - 6$.

We do

Together. Determine the degree of the polynomial: $23ab^2 - 14$.

You do

Your turn. Jonathan thinks that $\frac{1}{3}$ and $\frac{1}{x}$ are both monomials. What is wrong with his reasoning?

Your turn. In this problem, find the difference of the polynomials and simplify the result. $(w^2 + w - 42) - (w^2 - 10w + 24)$

Practice

1. Compute the sum or difference of the monomials and simplify.

$$5u^2 + 4v^2 - 6u^2$$

2. Determine the degree of the polynomial: $m^4 + 4m^3 + 6m^2 + 4m + 1$.

3. Determine the degree of the polynomial: $-12p^4$.

4. Determine the degree of the polynomial: $y^3 - 8y^2 + 2y - 16$.