

Warm-Up Notes

MAT 100: ELEMENTARY ALGEBRA

— Fall 2026 —

SECTION 6.3 MULTIPLY POLYNOMIALS

Install — 10 minute lesson

Objectives of this Section

- Multiply a polynomial by a monomial
- Multiply a binomial by a binomial
- Multiply a trinomial by a binomial

Skills**Introduced in this section:**

- **POL.MP** — Multiplying polynomials

Also practiced: EXP.DI (Distributive Property), POL.AS (Adding-Subtracting Polynomials).

Lesson

Distributing is a move you already own: one term times a parenthesis, and that term touches everything inside. Multiplying polynomials is the exact same move, just done more times — every term in the first factor has to multiply every term in the second factor before you're allowed to combine anything.

I do

Watch. Compute and simplify the product: $5q^3(q^2 - 2q + 6)$.

We do

Together. Compute and simplify the product: $6(y^2 + 8y + 16)$.

You do

Your turn. Multiply the binomials $(2t - 9)$ and $(10t + 1)$.

Your turn. Compute and simplify the product: $(2y - 9)y$.

Practice

1. Multiply the binomials $(a + b)$ and $(2a + 3b)$.
2. Multiply the binomials $(m + 11)$ and $(m - 4)$.
3. Compute and simplify the product: $-5m(m^2 + 3m - 18)$.
4. Compute and simplify the product: $q(q + 5)$.