

9.3 Key Concepts 2 Multiplying a Polynomial by a Negative Monomial

Worked Example

Example: Expand $-6x^2(x^3 - 2x^2 - x + 5)$.

Solution: Multiply each term in the polynomial by the monomial. Since the monomial is negative, be sure to change the sign of each of the terms in the polynomial.

$$-6x^2(x^3 - 2x^2 - x + 5) = -6x^5 + 12x^4 + 6x^3 - 30x^2$$

Practice:

1. Expand $-m(3m - 2n)$.

2. Expand $-2d(3d^2 - d - 4)$.

Answers: 1. $-3m^2 + 2mn$, 2. $-6d^3 + 2d^2 + 8d$.