

To multiply a polynomial by a monomial, use the distributive property and the laws of exponents.

$$9m^3n^4(3m^2) + 9m^3n^4(-m^2n^2) + 9m^3n^4(6n^2) = \\ 27m^5n^4 - 9m^5n^6 + 54m^3n^6$$