02/01/2024 Coefficients

I’ve been thinking about math again☺ Specifically, I was thinking about polynomials. Terms, monomials, binomials, trinomials, the leading coefficient of each term, and graphing polynomials in GeoGebra.

What is a coefficient? I know that a bullet has a ballistic coefficient. I also know that changing the coefficient changes the look of a parabola when you graph it in GeoGebra. Other than that, not much else. Let’s look at the following polynomial contained within the quadratic equation.

In the before noted equation, a, b and c are coefficients (c is a constant.) To be more precise, the first is the quadratic coefficient, the second is the linear coefficient, and the last is the constant coefficient. The leading coefficient is the coefficient of the first term (or of the highest degree), in this case it would be a. The first terms variable x has a degree of 2. Coefficients are usually an integer. If there is no coefficient than it is assumed to be 1. The coefficient is a multiplicative factor of the variable within the polynomial.

This is all great but what is it for? Turns out we can gather some information concerning the sum of the roots and the product of the roots. Not quite sure how to do that yet.

All of this is enough for me to “chew on” for a bit. I think I’m going to see if I can login to my old GeoGebra account and play around a bit.