Since expanding a binomial corresponds to one row of Pascal’s triangle, we will explore how expanding a trinomial corresponds to a 2-dimensional space, and expanding a quadrinomial corresponds to a 3-dimensional space. But, how do we wrap our minds around the geometric representation of expanding a polynomial of five terms and beyond? Typically, that might be with hyper-tetrahedrons or an n-simplex, which try to describe higher dimensions and, thus, difficult to comprehend. We will be linking the Mathematics of expanding a polynomial to geometric interpretations we can easily understand. We will develop new formulas for the expansion of a multinomial and see how they are related to the geometric representations. The formulas will allow us to expand any size polynomial and the corresponding graphics will foster creativity, opening the door to all students to the beauty of Mathematics. (Received September 17, 2019)