

MA 614 – Homework 15
Due Friday, Feb 16

This homework is a short essay. You must type your homework in LaTeX. This essay should be 1-2 pages in length when using the amsart documentclass package at 11pt font. (You do not have to use this formatting, you may write the equivalent in a different format).

1. We have seen several combinatorial interpretations of the Gaussian polynomials, aka the q -binomial coefficients, related to inversion numbers of permutations of multisets, lattice paths, partitions, and subspaces of finite fields. How do you understand q -binomial coefficients at this point? Which of these interpretations makes the most sense? If one of your fellow students was confused about combinatorial interpretations of the q -binomial coefficients, what specific example or examples would you use to help them get a better idea what is going on?