

MA 614 – Homework 20

Due Friday, March 4

This homework is a short essay. You must type your homework in LaTeX. This essay should be 2-3 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).

Discuss the subject of enumerative combinatorics in a way that reveals how you understand it, from both a “big picture” perspective and in terms of the “devilish” details. Here are some prompts that might help get you started – feel free to discuss other matters if they are more relevant.

- What are some of the major goals and themes of enumerative combinatorics?
- What are some of the major objects? How are these related to each other?
- What are some of the major theorems? Why are these important? How are these related to each other?
- What are some of the major techniques used for proofs? Why are these important? Which ones do you find most useful? Are there some that are particularly useful for certain objects but not others?
- What are some of the most enlightening examples in this subject? Why are they enlightening? How do they relate to the major theorems and techniques in the course?
- What are some of the most effective problem solving strategies you have developed for yourself so far?

“Revision gives us a second chance at life. . . Each time we revise, we may:

- *Discover we know more than we thought.*
- *Change what we feel about what we know.*
- *Extend what we know as the draft makes unexpected connections.*

. . . Do not think revision is superficial. Revision is the reordering of experience so that it reveals meaning. It is the great adventure of the mind.”

from *The Craft of Revision*, by Donald Murray