

1. *Assignment*
 - a. Are there further questions about the social organization of mathematics?
 - b. Continue reading Gillman 1987 chapter 6.
2. *Gillman 1987 chapter 5.* The class agreed that it would be most appropriate to finish discussing Gillman before critiquing the sample term papers. So Ms. Wang led a discussion of its chapter 5.
 - a. She commented that Gilmann seemed to be saying in some instances that problems arise that require ad-hoc common-sense solutions. Indeed so. But the point of rules is to minimize the number of such situations, so you can spend adequate effort on them!
 - b. By avoiding unnecessary symbols, you avoid problems with them. For example, if an early occurrence was unnecessary, you might not remember it when you start using that symbol for something else; that confuses readers. Also, if you need to change that symbol to something else, you may not remember to change the unnecessary occurrences. I call this *defensive* writing!
 - c. The $ax + by$ convention, as opposed to the $a_1x_1 + a_2b_2$ convention, is not so easily extended to higher dimensions. Even in 3D you run out of letters.
 - d. I try to use this convention for sets of increasing complexity: $a \in A \in \mathcal{A}$. You'll see the convention $\gamma \in \Gamma$, but unfortunately, some uppercase Greeks are indistinguishable from Latins. Geometers tend to use $P, Q, \dots$ for points, $g, h, \dots$ for lines, and $\varepsilon, \zeta, \dots$ for planes, because the German words for those objects are *Punkt*, *Gerade*, and *Ebene*. By using the exotic symbol $\in$ for membership you free up ε for many other uses.
 - e. See my blurb [Typefaces I use in mathematics](#). That was the product of some effort. Each typeface save the first resulted from serious compromise.
 - i. I chose my text typeface around 1989, when I bought my first laser printer. It's easier to read and less crowded than some other standard ones. (Times New Roman, for example, was designed to save space in the London *Times*. It always seems cramped to me, and should never have become the computer standard it is.
 - ii. My computer-code typeface is monospaced, not proportionally spaced, so that lines of text will align letter by letter. Unfortunately, it is not the same size as my corresponding text font, so I have to adjust for that.
 - iii. I had to search to find a script typeface all of whose letters are appropriately legible. This one suffers the same size problem as my code typeface.
 - iv. My blackboard bold typeface is unsuitable because it doesn't reflect what mathematicians write on the blackboard. But it's the closest I could come, for a complete alphabet.
 - v. My German typeface also includes the letter sz (written β in Roman) and the those with Umlauten: $\beta \ddot{a} \ddot{Q} \ddot{v} \ddot{O} \ddot{u} \ddot{U}$. But its $\mathfrak{s}$ is the form used

only at the ends of words. Another typeface includes the form of that letter used in the middle: $\mathfrak{f}$. But at one time the makers of that typeface didn't license it to Adobe, so it wouldn't come out right in *.pdf files. If this one does, the problem has gone away.

- vi. My Greek typeface does closely match my text typeface, but its height is slightly wrong. Often, when Latin and Greek letters are juxtaposed in a formula, I have to make an adjustment.
- vii. Because of the difficulty of getting all details acceptable, I would change my typeface standards only after major deliberation. More details on these decisions, and a display of the macros I crafted years ago for symbols, are found in the document [WordPerfect symbols](#) on my website. (I have to keep records like that in order to recall the reasons for my decisions.)
- f. Notice: symbolic expressions are *always* separated from ordinary text by *two* spaces.
- g. Superscripted superscripts and subscripted subscripts are a pain, to be avoided if at all possible. Pieri used them inline, and thus I had to, in the translation, chapter 3 of Marchisotto and Smith 2007. That required jiggling line breaks and interword spacing to avoid collisions of letters on neighboring lines. Avoid that situation!