

1. *Assignment*
 - a. Consider the remaining few questions about the in-class outline:
 - i. Should we insert history? If so, where?
 - ii. Should we mention any applications outside linear algebra?
 - iii. What should a concluding section look like?
 - iv. What's the title?
 - b. Are there further questions about the social organization of mathematics?
 - c. Continue reading Gillman 1987 and prepare to discuss it.
2. Ms. Morgan led a discussion of Gillman 1987, chapters 1–2. We added the following points.
 - a. We'll return to the construction of opening paragraphs.
 - b. Does the introduction of our in-class outline avoid pileup of prerequisites?
 - i. I think we could say that it presupposes familiarity with rings, fields, and vector spaces, but that we need to give the details of the definitions of division rings and vector spaces in order to permit some fine distinctions later.
 - c. Here's an example of overuse of notation:

Among the subspaces S of a vector space V is the direct sum $S = X + Y$ of any two subspaces X and Y of V .

Each time you use a symbol you create potential problems: for example, typesetting, miscopying, using the same variable later, for something else, without warning. Why invite them? The symbols may have been useful to you when you were thinking about the text, but they're simply distracting to readers. Rephrase the sentence:

Among the subspaces of a vector space is the direct sum of any two of its subspaces.
 - d. Recall the point at which we divided the in-class outline into sections.
 - e. Note our effort to introduce examples in it.
3. Gillman's comment about the purpose of a bibliography is worth preaching about. It is *not* to record what you've read. Rather, it is to lead readers to information they can use to check your statements, and to pursue your questions further.
 - a. If you want to alert the reader to a source of additional information that you did not in fact use for any specific purpose in your text, you should create a small section and tell your reader about it there. If it's not important enough for that, don't list it in the bibliography.
 - b. It makes no sense to cite an Internet source that may change before your reader can consult it.
 - c. I think most mathematicians would now disagree with Gillman's stress on citing only published materials. We often post materials before publication,

for timely dissemination. Some historical materials are never published, they're in private or public archives. Some information obtained by private communication will never be published. The bibliography of Marchisotto & Smith 2007 contains many examples of all these types of citations.

- d. I disagree with Gillman about accessibility: if you're going to cite a "standard" source of some information, expecting readers to refer to it, make it, if possible, a source that they'll be able to find.
 - i. For example, don't cite your favorite text for an undergraduate subject if it happens to be out of print and not in most libraries.
 - ii. In Marchisotto & Smith 2007 I chose to direct all Pieri references to his original publications rather than to their reprints in a volume of his collected works, because hardly any U.S. libraries have the latter, whereas interlibrary loan services will easily obtain the former. Page numbers in the collected works would be nearly useless.