

1. *Assignment*
 - a. Continue formulating questions about the paper we're outlining in class.
 - i. Where should examples go?
 - ii. What about history?
 - iii. What general cleanup and rearrangement is appropriate?
 - b. Continue formulating questions about the social organization of mathematics.
2. *Refereeing*
 - a. In outline 5 I mentioned the process of publishing a mathematical paper. One selects an appropriate journal and sends the manuscript to a managing editor. That editor farms it out to a more specialized editor generally familiar with the subject, who then selects a referee who is really expert. The referee checks every detail and recommends for, against, and/or suggests revisions required.
 - b. Who are these editors? Professors, and a few industrial mathematicians.
 - c. I showed how to navigate through the Department website to Prof. Gubeladze's website, which indicates that he is an editor of the journal *Algebra and Number Theory*. Dean Axler's site reveals that he has served as an editor of the *Mathematical Intelligencer* and the *American Mathematical Monthly*.
 - d. Who are the referees? Professors, and a few industrial mathematicians.
 - e. The refereeing process is nominally double-blind. That is, neither author or referee is informed of the identity of the other. Of course, for a typical research paper there are probably at most ten individuals who are familiar enough with its subject to write it or readily check its details. And authors commonly post in public drafts of their papers in preparation.
 - f. Refereeing a major research paper can take weeks of intense effort.
 - g. This editing and refereeing are generally done for free: professionals mathematicians regard it as part of their jobs.
 - h. After a paper is accepted for publication, the author collaborates with an editor on the final editing and composition. Some of the editors in that process work for the publisher.
3. *MathSciNet*
 - a. We've seen that various journals publish book reviews.
 - b. But so far I hadn't mentioned explicitly the sources of reviews of research papers.
 - c. For mathematics in general, the premier source is [MathSciNet](#), part of the website of the American Mathematical Society. Our Internet access is paid for by SFSU. To gain access via an off-campus connection, you must identify yourself to our Library's proxy server.
 - d. *MathSciNet* reviews virtually every research paper in mainstream mathematics, overlapping into some adjacent disciplines. Reviews seem to be posted rather promptly these days.

- e. We looked up reviews of Smith 2002, Gubeladze and Mushkudiani 2006, and Scott and Suppes 1958, all of which have had some previous attention in class or by individual students.
 - f. Reviews are provided both in L^AT_EX, which is unreadable, and in *.pdf files, which are fine. Nowadays reviews are generally in English, the current international language of mathematics. But the review of Scott and Suppes 1958 was in German: half a century ago English was less widespread.
 - g. The Society probably receives tables of contents and abstracts of papers as they're published by the hundreds of mathematics journals. Its management classifies them and sends them to willing reviewers who know the areas.
 - h. Reviewing a published research article is not as time-consuming as refereeing one before publication, because it has already been vetted and to some extent edited for reader comprehensibility. But I suspect that reviewing a paper takes on average about a week. Reviewers are not paid. They regard reviewing as part of their responsibility as professional mathematicians.
 - i. I haven't been a *MathSciNet* reviewer, but Prof. Gubeladze has: the search engine listed 53 reviews by him.
 - j. You should get in the habit of reading reviews *before* you attempt to read a paper. It doesn't take long and may provide essential information that you'd spend hours digging out of the paper.
4. *Other contemporary review sources*
- a. Several specialized journals publish reviews of most research papers in their areas. Sometimes these papers are also reviewed in *MathSciNet*. Often, since the management of *MathSciNet* knows those papers will be reviewed elsewhere, its own review is cursory.
 - b. Computer Science: I believe the Association for Computing Machinery has a service comparable to *MathSciNet*, but I haven't checked it recently.
 - c. Logic and Foundations: the *Journal of Symbolic Logic* reviews in this area, and all but its most recent five years are accessible on the Internet via *JStor*. Use the *JStor* search engine.
 - d. *Zentralblatt MATH*. This German online resource continues a previous hardcopy reviewing journal. It publishes abstracts prepared by the authors of papers. I'm not familiar with it.
5. *Historical sources*
- a. *MathSciNet* was formerly the hardcopy journal *Mathematical Reviews*, which started publication in 1940.
 - b. How do you find reviews of papers and books published earlier?
 - c. Look in [*Jahrbuch über die Fortschritte der Mathematik*](#). It served the same purpose with hardcopy from about 1868 to about 1942, and is now available on the Internet. "About" means that it was slow getting started, and died a slow death from the mid 1920s on. Some of its editors migrated to the U.S. during the 1930s and started what has become *MathSciNet*. Most of the *Jahrbuch* reviews are more detailed than you would expect nowadays in *MathSciNet*, but of course, they're generally in German.