Bibliography

This is certainly not meant to be comprehensive, but it does list numerous books and papers that influenced the writing of these notes as well as references to some additional topics that were mentioned but not discussed in much detail. Throughout the notes there are also references to World Wide Web sites for further information on various points; in all cases, the mathematical content of online sites has been checked for reliability and meets the standards of quality expected for regular printed publications.

1. Books covering background material


E. E. Moïse and F. L. Downs.  Geometry. Addison-Wesley, Reading, MA, 1964. [There are also numerous later versions of this text, the last of which was published in 1991, and there are standard accompanying materials such as Teachers' Editions.]


2. Cultural and historical discussions of projective geometry


¹This has a classic book on problem solving for half a century. George Pólya (1887–1985) worked in probability, analysis, number theory, geometry, combinatorics and mathematical physics.

²This book is a fascinating piece of literature, but its historical scholarship is extremely inaccurate in many places.

³Richard Courant (1888–1972) is known for his work on differential equations, for several outstanding books that have remained timely over many decades, and his establishment of a prestigious mathematical institute which now carries his name. Harold Robbins (1915–2001) made several major contributions to mathematical statistics and also did research in several other areas.


### 3. Similar material to the notes at comparable levels

(The references at the end of Appendix E also fit into this category.)


I. Kaplansky. *Linear Algebra and Geometry – A Second Course.* Dover, New York, 2003.\(^7\) (This could also be listed under heading 5 below).


\(^4\)Morris Kline (1980–1972) is known for his books on the history and teaching of mathematics and his provocative views. A very brief description of his work and views appears in the online document [http://en.wikipedia.org/wiki/Morris_Kline](http://en.wikipedia.org/wiki/Morris_Kline). Kline's books contain a great deal of information and many extremely well-written passages. However, his views on several topics are highly controversial, and frequently he makes sweeping, dramatic assertions which ignore key facts or the underlying complexities of certain issues. One must be aware of these when reading his strongly negative comments about 20th century mathematics or the mathematical legacies of certain ancient or Non-Western cultures.

\(^5\)Chapters X and XI are particularly relevant to these notes.

\(^6\)This book has been a classic reference for undergraduate abstract algebra since the publication of the First Edition in 1941, and it was the first book of its kind in English. Saunders MacLane (1909–2005) did noteworthy work in several areas of mathematics, and he is best known for his extremely influential work on category theory, which is the abstract study of functions or morphisms from one mathematically structured object to another.

\(^7\)Irving Kaplansky (1917–2006) did important work in many different areas of algebra, including some topics with close ties to other major parts of mathematics.
4. RELATED MATERIAL AT COMPARABLE LEVELS

(Most books under heading 3 also deserve a secondary classification here.)


5. MORE ADVANCED MATERIAL OR AT HIGHER LEVELS

(The references at the end of Appendix C also fit into this category.)


8Harold Smith MacDonald (Donald) Coxeter (1907–2003) is mainly known for his research which establishes fundamental links between classical and modern themes in geometry, his influence which is reflected by numerous classic texts on various aspect of geometry, and his interactions with famous nonmathematicians whose work had substantial mathematical content, most notably the artist Maurits C. Escher (1898–1972) and the architect/visionary R. Buckminster Fuller (1895–1983).

9Since the appearance of the First Edition in 1953, this book has been a classic, frequently cited reference for the theory of functions of real variables at the undergraduate level.


6. PAPERS OR JOURNAL ARTICLES


\(^{10}\) Gian-Carlo Rota (1932–1999) is mainly known for his highly influential work in combinatorics (the study of finite mathematical objects), and he also made noteworthy contributions to functional analysis and ergodic theory.

\(^{11}\) William Vallance Douglas Hodge (1903–1975) discovered fundamentally important relationships involving algebraic geometry, differential geometry and partial differential equations, and his *Hodge Conjecture* on such relationships is regarded as one of the most important open questions in mathematics.

\(^{12}\) Nathan Jacobson (1910–1999) made numerous fundamental contributions to the theory of abstract algebraic systems.


7. **Unpublished material**


8. **Links to the World Wide Web**

(These sites have been checked out and found to be reliable.)

http://www.dartmouth.edu/~matc/math5.geometry/unit11/unit11.html

http://en.wikipedia.org/wiki/Projective_geometry

http://www.nct.anth.org.uk/wiki/Projective_geometry


http://robotics.stanford.edu/~birch/projective

http://www2.maths.ox.ac.uk/~hitchin/hitchinnotes/hitchinnotes.html

http://www.stolaf.edu/people/cederj/Courses.dir/bib-356/index.html#beginning

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13Shing-Shen Chern (1911–2004) was one of the leading figures in 20th century differential geometry, with research including several fundamental advances and wide ranging influence upon the development of the subject.