

Bibliography for

Topics and Problems in Deductive Geometry

August 1989

The following bibliography accompanied a set of lecture notes I wrote at Purdue University in the late 1980s. It is definitely not up to date, and in particular it says nothing about the massive amount of computer software that has been produced since that time or the many excellent sites that now exist on the World Wide Web. However, on numerous occasions it has been useful for me to consult this list of books and papers, so I am posting as it is with no attempt to bring it up to date.

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A

- C. F. Adler, *Modern Geometry: An Integrated First Course (Second Edition)*. McGraw–Hill, New York, 1967.
- F. J. Almgren, Minimal surface forms, *Mathematical Intelligencer* 4 (1982), 164–172.
- N. Altshiller-Court, *College Geometry*. Barnes and Noble, New York, 1952.
- N. Altshiller-Court, *Modern Pure Solid Geometry*. Macmillan, New York, 1935.
- N. Altshiller-Court, *Mathematics in Fun and in Earnest*. New American Library, New York, 1961.
- K. Appel and W. Haken, *The solution of the four-color-map problem*, *Scientific American* Vol. 237 No. 4 (October, 1977), 108–121; reprinted with revisions, *Mathematics Today: Twelve Informal Essays* (ed. by L. A. Steen), 141–180. Vintage Books, New York, 1980.
- R. Artzy, *Linear Geometry*. Addison-Wesley, Reading, Mass., 1965.

B

- R. Baer, *Linear Algebra and Projective Geometry*, *Pure and Applied Mathematics* Vol. 2. Academic Press, New York, 1952.
- A. Baker, *Transcendental Number Theory*. Cambridge University Press, New York, 1975.
- S. F. Barker, *Philosophy of Mathematics*. Prentice-Hall, Englewood Cliffs, H. J., 1964.
- A. N. Barrett and A. L. Mackay, *Spatial Structure and the Microcomputer: Selected Mathematical Techniques*. MacMillan, London (U. K.), 1987.
- W. W. Rouse Ball and H. S. M. Coxeter, *Mathematical Recreations and Essays (Twelfth Edition)*. University of Toronto Press, Toronto, 1974.
- J. H. Banks, A. S. Posamentier, and R. L. Bannister, *Geometry: Its Elements and Structure*. Webster Division, McGraw- Hill, New York, 1972.
- G. C. Bartoo and J. Osborn, *Solid Geometry*. Webster, St. Louis–Dallas–San Francisco, 1940.
- L. M. Batten, *Combinatorics of Finite Geometries*, Cambridge University Press, New York, 1986.
- A. F. Beardon, *The Geometry of Discrete Groups*, *Graduate Texts in Mathematics*, Vol. 91. Springer, New York, 1983.
- P. Beckmann, *A History of Pi (Second Edition)*. St. Martin’s Press, New York, 1971.
- M. J. Behr and D. G. Jungst, *Fundamentals of Elementary Mathematics: Geometry*. Academic Press, New York, 1972.
- H. Behnke, F. Bachmann, K. Fladt, and H. Kunle (*eds.*), *Fundamentals of Mathematics, Volume II: Geometry* (transl. from the Second German Edition by S. H. Gould). MIT Press, Cambridge, Mass., 1974.
- R. V. Benson, *Euclidean Geometry and Convexity*. McGraw-Hill, New York, 1966.
- A. Beutelspacher, *Einführung in die endliche Geometrie I: Blockpläne*. Bibliographisches Institut, Mannheim-Vienna- Zurich, 1982.
- G. Birkhoff, *Lattice Theory (Third Edition)*. American Mathematical Society, Providence, R.I., 1967.
- G. Birkhoff and S. MacLane, *Survey of Modern Algebra (Fourth Edition)*. MacMillan, New York, 1977.
- G. D. Birkhoff, *A set of postulates for plane geometry, based on scale and protractor*, *Annals of Mathematics* 33 (1932), 329–345.

- G. D. Birkhoff and R. Beatley, *Basic Geometry*. Scott-Foresman, Chicago, 1940.
- B. Bold, *Famous Problems of Geometry and How to Solve Them*. Dover, New York, 1982.
- R. Bonola, *Non-Euclidean Geometry* (Transl. by H. S. Carslaw). Dover, New York, 1955.
- K. Borsuk and W. Szmielew, *Foundations of Geometry* (Revised English Translation). North Holland, Amsterdam (Neth.), 1960.
- C. B. Boyer, *A History of Mathematics*. Wiley, New York, 1968.
- R. Bracewell, *The Fourier transform*, *Scientific American* Vol. 260 No. 6 (June, 1989), 86–95.
- R. Artzy, *Linear Geometry*. Addison-Wesley, Reading, F. J. Budden and C. P. Wormell, *Mathematics through Geometry: An Inquiry into the Place of Geometry in the School Mathematics Syllabus*, Commonwealth and Internat. Lib. Maths. Div. Vol. 17. Pergamon, London, 1964.
- R. L. Bumcrot, *Modern Projective Geometry*. Holt, Rinehart, and Winston, New York, 1971.
- B. H. Bunch, *Mathematical Fallacies and Paradoxes*. Van Nostrand Reinhold, New York, 1982.
- C. M. Bundrick, R. C. Frazer, and H. C. Gerber, *Developing finite geometry: A Math Club approach*, *Mathematics Teacher* 63 (1970), 487–492.
- D. B. Byrkit and W. M. Waters, *A note concerning a common angle “trisection”*, *Mathematics Teacher* 65 (1972), 523–524.

C

- D. M. Campbell and J. C. Higgins, *Mathematics: People, Problems, Results* (Vols. I–III). Wadsworth, Belmont, Calif. 1984.
- C. Carico, H. Hyatt, J. Drooyan, and J. Hardesty, *Geometry*. Macmillan, New York, 1970.
- M. P. do Carmo, *Differential Geometry of Curves and Surfaces*. Prentice-Hall, Englewood Cliffs, N. J., 1976.
- J.-C. Carrega, *Théorie des corps: la règle et le compas*, *Actualités Scientifiques et Industrielles* No. 1402. Hermann, Paris, 1981.
- A. Cayley, *Chapters in the analytical geometry of n dimensions*, *Cambridge Mathematical Journal* Vol. 4 (1845), 119–127; reprinted in A. Cayley, *Collected Mathematical Papers*, Vol. I, 55–62 (Cambridge University Press, Cambridge, U. K., 1889).
- A. Clark, *Elements of Abstract Algebra*. Wadsworth, Belmont, Calif., 1971.
- S. R. Clemens, P. G. O’Daffer, and T. J. Cooney, *Geometry with Applications and Problem Solving*. Addison-Wesley, Reading, Mass., 1983.
- R. Connelly, *A flexible sphere*, *Mathematical Intelligencer* 1 (1978), 130–131.
- H. S. M. Coxeter, *The abstract groups $G_{m,n,p}$* . *Transactions of the American Mathematical Society* 45 (1939), 73–150.
- H. S. M. Coxeter, *The Real Projective Plane* (Second Edition). Cambridge University Press, New York, 1955.
- H. S. M. Coxeter, *Introduction to Geometry* (Second Edition). Wiley, New York, 1962.
- H. S. M. Coxeter and S. L. Greitzer, *Geometry Revisited*, *New Mathematical Library*, Vol. 19. Random House, New York, 1967.
- H. S. M. Coxeter and W. O. J. Moser, *Generators and Relations for Discrete Groups* (Second Edition), *Ergebnisse der Mathematik und ihre Grenzgebiete* (2. Folge), Bd. 14. Springer, New York, 1965.
- H. Crapo and G.-C. Rota, *On the Foundations of Combinatorial Theory: Combinatorial Geometries*. MIT Press, Cambridge, Mass., 1970.

D

- E. E. David, *The federal support of mathematics*, Scientific American Vol. 252 No. 5 (May, 1985), 45–51.
- K. Devlin, *Mathematics: The New Golden Age*. Viking-Penguin, New York, 1988.
- I. A. Dodes, *Geometry*. Harcourt Brace World, New York, 1965.
- D. Downing, *Computer Programming in BASIC the Easy Way*. Barron's Educational Series, Woodbury, N. Y., 1983.
- I. Dressler, *Geometry*. Amsco School Publications, New York, 1973.
- JA. S. Dubnov, *Mistakes in Geometric Proofs* (Transl. and adapted from the Second Russian Edition (1955) by A. K. Henn and O. Titelbaum). D. C. Heath, Boston, 1963.
- U. Dudley, *What to do when the trisector comes*, Mathematical Intelligencer 5 No. 1 (1983), 20–25.
- U. Dudley, *A Budget of Trisections*. Springer, New York, 1987.

E

- D. B. A. Epstein, *Geometrical structures on manifolds*, Mathematical Intelligencer 4 (1982), 5–16.
- M. C. Escher and J. L. Locher, *The World of M. C. Escher*. New American Library, New York, 1974.
- H. Eves, *A Survey of Geometry* (2 Vols.). Allyn and Bacon, Boston, 1965.
- H. Eves, *An Introduction to the History of Mathematics* (Third Edition). Holt, Rinehart, and Winston, New York, 1969.

F

- R. L. Faber, *Foundations of Euclidean and Non-Euclidean Geometry*, Marcel Dekker Series in Pure and Applied Mathematics Volume 73. Marcel Dekker, New York, 1983.
- W. W. Fearnside and W. B. Holther, *Fallacy—The Counterfeit of Argument*. Prentice-Hall, Englewood Cliffs, N. J., 1959.
- W. T. Fishback, *Projective and Euclidean Geometry* (Second Edition). Wiley, New York, 1969.
- M. Fogiel (*ed.*), *The Geometry Problem Solver* (Second Printing, with revisions). Research and Education Associates, New York, 1979.
- H. G. Forder, *Foundations of Euclidean Geometry*. Dover, New York, 1958.
- G. K. Francis, *A Topological Picturebook*. Springer, New York, 1987.
- J. S. Frame, *Solid Geometry*. McGraw-Hill, New York, 1948.
- D. Z. Freedman and P. van Nieuwenhuizen, *The hidden dimensions of spacetime*, Scientific American Vol. 252 No. 3 (March, 1985), 74–81.

G

- L. E. Garner, *An Outline of Projective Geometry*. Elsevier-North Holland, New York, 1969.

K. F. Gauss, *Disquisitiones Arithmeticae* (Latin; English transl. by A. A. Clarke). Yale University Press, New Haven, 1966.

J. Gleick, *Chaos: Making a New Science*. Viking, New York, 1987.

S. G. Gnidinkin, *The complex universe of Roger Penrose*, *Mathematical Intelligencer* 5 No. 1 (1983), 27–35.

D. Gorenstein, *The enormous theorem*, *Scientific American* Vol. 253 No. 6 (December, 1985), 104–115.

S. Gorn, *On incidence geometry*, *Bulletin of the American Mathematical Society* 46 (1940), 158–167.

L. M. Graves, *A finite Bolyai-Lobachevsky plane*, *American Mathematical Monthly* Vol. 69 (1963), 130–132.

M. J. Greenberg, *On J. Bolyai's parallel construction*, *Journal of Geometry* 12 (1979), 45–64.

M. J. Greenberg, *Euclidean and Non-Euclidean Geometries—Development and History* (Second Edition). W. H. Freeman, San Francisco, 1980.

K. W. Gruenberg and A. J. Weir, *Linear Geometry*. Van Nostrand, Princeton, N. J., 1967.

H. W. Guggenheimer, *Plane Geometry and Its Groups*. Holden-Day, San Francisco, 1967.

H

G. Hadley, *Linear Algebra*. Addison-Wesley, Reading, Mass., 1961.

M. Hall, *Combinatorial Theory*. Ginn-Blaisdell, New York, 1967.

P. R. Halmos, *Naive Set Theory*. Van Nostrand, Princeton, N. J., 1960.

A. Harnadek, *Mathematical Reasoning*. Midwest Publications, Birmingham, Mich., 1969.

A. Harnadek, *Mind Benders—Deductive Thinking Skills* (Series Titles: Warm-up Mind Benders, Mind Benders A1-A4, B1-B4, C1-C4, and Instructions). Midwest Publications, Pacific Grove, Calif., 1978 (1 & 2 numbered volumes and Instructions), 1979 (Warm-up Mind Benders), 1981 (3 & 4 numbered volumes).

R. Hartshorne, *Foundations of Projective Geometry*. Benjamin, New York, 1967.

M. Hausner, *A Vector Space Approach to Geometry*. Wiley, New York, 1962.

S. N. Heath, *General finite geometries*, *Mathematics Teacher* 64 (1971), 541–545.

S. N. Heath, *The existence of finite Bolyai-Lobachevsky planes*, *Mathematics Magazine* 43 (1970), 244–249.

T. L. Heath, *The Thirteen Books of Euclid's Elements* (Transl. from the text of Heiberg, with Introduction and Commentary, Second Edition), Volumes I – III. Dover, New York, 1956.

T. L. Heath, *History of Greek Mathematics*, Volumes I and II. Oxford University Press, Oxford (U. K.), 1921.

H. von Helmholtz, *Über Geometrie*. Wissenschaftliche Buchgesellschaft, Darmstadt (W. Ger.), 1968.

H. von Helmholtz, *Popular Scientific Lectures* (selected and edited by M. Kline). Dover, New York, 1962.

L. D. Henderson, *The Fourth Dimension and Euclidean Geometry in Modern Art*. Princeton University Press, Princeton, 1983.

I. N. Herstein, *Topics in algebra*. Ginn-Blaisdell, New York, 1964.

D. Hilbert, *Foundations of Geometry* (Tenth Edition, revised and enlarged by P. Bernays, Engl. transl.). Open Court, LaSalle, Ill., 1971.

J. W. P. Hirschfeld, *Finite Projective Spaces of Three Dimensions*, Oxford University Press, New York, 1986.

E. M. Hobson, *Squaring the Circle*. Cambridge University Press, Cambridge (U. K.), 1913; reprinted with 3 other monographs, Chelsea, New York, 1953.

G. Hochschild, *A Second Course in Analytic Geometry*. Holden-Day, San Francisco, 1968.

W. V. D. Hodge and D. Pedoe, *Methods of Algebraic Geometry, Volume I*. Cambridge University Press, New York, 1968.

R. L. Honsberger, *Mathematical Gems, Dolciani Mathematical Expositions No. 1*. Mathematical Association of America, Washington, D. C., 1973.

R. L. Honsberger, *The butterfly problem and other delicacies from the fine art of Euclidean Geometry - Part 2*, *Two Year College Mathematics Journal* 14 (1983), 154-155.

A. F. Horadam, *Undergraduate Projective Geometry*. Pergamon Press, New York, 1970.

D. R. Hughes and F. C. Piper, *Design Theory*. Cambridge University Press, New York, 1985

J

H. R. Jacobs, *Geometry*. W. H. Freeman, San Francisco, 1974.

I. J. Agolom and V. Boltjanskii, *Convex Figures* (English transl. by P. J. Kelly and L. F. Walton). Holt, Rinehart, and Winston, New York, 1961.

F. Jehle, *Boolsche Algebra*. Bayrischer Schulbuch-Verlag, Munich, 1978. (An accompanying manual, "Lösungen," was published by the BSV in 1981.)

R. A. Johnson, *Modern Geometry*. Houghton-Mifflin, Boston, 1929.

Joint Committee of the Mathematical Association of America and the National Council of Teachers of Mathematics, *A Sourcebook of Applications of School Mathematics*. National Council of Teachers of Mathematics, Reston, Va., 1980.

R. C. Jurgensen, R. G. Brown, and A. M. King, *Geometry (New Edition)*. Houghton Mifflin, Boston, 1983.

R. C. Jurgensen, A. J. Donnelly, and M. P. Dolciani, *Modern Geometry: Structure and Method*. Houghton Mifflin, Boston, 1963.

K

M. J. Kallaher, *Affine Planes with Transitive Collineation Groups*. American Elsevier-North Holland, New York, 1982.

D. Kalish and R. Montague, *Logic—Techniques of Formal Reasoning*. Harcourt Brace Jovanovich, New York, 1964.

I. Kaplansky, *Linear Algebra and Geometry—A Second Course*. Allyn and Bacon, Boston, 1969.

I. Kaplansky, *Set Theory and Metric Spaces*. Allyn and Bacon, Boston, 1972.

F. Kárteszi, *Introduction to Finite Geometries*. American Elsevier, New York, 1976.

M. L. Keedy, *Foundations of Elementary Geometry*, to appear.

P. J. Kelly and N. E. Ladd, *Fundamental Mathematical Structures: Geometry*. Scott-Foresman, Chicago, 1965.

- M. Kline, *Mathematics in Western Culture*. Oxford University Press, New York, 1955.
- M. Kline, *Mathematical Thought from Ancient to Modern Times*. Oxford University Press, New York, 1972.
- M. Kline, *Mathematics for the Nonmathematician*. Dover, New York, 1985.
- W. Klingenberg, *Lineare Algebra und Geometrie*. Springer, New York, 1984.
- W. R. Knorr, *The Evolution of the Euclidean Elements*, Synthese Historical Library Vol. 15. Reidel, Dordrecht (Neth.) and Boston, 1975.
- E. F. Krause, *Taxicab Geometry (An Adventure in Non-Euclidean Geometry)*. Dover, New York, 1986.
- E. Kunz, *Ebene Geometrie*. Rowohlt/Vieweg, Hamburg/Wiesbaden, 1976.
- A. Kutepov and A. Rubanov, *Problems in Geometry* (Transl. from Russian by O. Meskov). Mir Publications, Moscow, 1975.

L

- C. W. H. Lam, L. Thiel, and S. Swiercz, *The nonexistence of finite projective planes of order 10*, Canadian Journal of Mathematics Vol. 41 (1989), pp. 1117–1123. New York, 1970.
- C. Lanczos, *Space Through the Ages*. Academic Press, New York, 1970.
- S. Lang, *Math! Encounters with High School Students*. Springer, New York, 1985.
- H. Levy, *Projective and Related Geometries*. Macmillan, New York, 1964.
- S. Lie, *Theorie der Transformationsgruppen*, Abschnitt Nr. 3. Teubner, Leipzig, 1894 (reprinted with minor corrections several times afterwards). [Abteilung V contains the material relevant to classical axiomatic geometry.]
- L. Lines, *Solid Geometry*. Dover, New York, 1956.
- P. Lorimer, *Some of the finite projective planes*, Mathematical Intelligencer 5 No. 2 (1983), 41–50.
- R. C. Lyndon, *Groups and Geometry*, London Mathematical Society Lecture Notes Series Vol. 101. Cambridge University Press, New York, 1985.

M

- G. Mackiw, *Applications of Abstract Algebra*. Wiley, New York, 1985.
- V. S. Mallory, *New Plane Geometry*. Sanborn, Chicago, 1943.
- W. Magnus, *Noneuclidean Tessellations and their Groups*, Pure and Applied Mathematics Vol. 61. Academic Press, New York, 1974.
- B. Mandelbrot, *The Fractal Geometry of Nature*. Freeman, New York, 1983.
- Mathematical Association, London (U.K.), *The Teaching of Geometry in Schools (Fourth Edition)*. G. Bell and Sons, London (U.K.), 1951.
- G. E. Martin, *The Foundations of Geometry and the Non-Euclidean Plane (Second Edition)*. Springer, New York, 1982.
- G. E. Martin, *Transformation Geometry: An Introduction to Symmetry*. Springer, New York, 1982.
- A. E. Meder, *What is wrong with Euclid?*, Mathematics Teacher 51 (1958), 578–584.

- B. E. Meserve, *Fundamental Concepts of Geometry*. Addison-Wesley, Reading, Mass., 1955.
- B. E. Meserve and J. A. Izzo, *Fundamentals of Geometry*. Addison-Wesley, Reading, Mass., 1969.
- R. D. Millman and G. D. Parker, *Geometry – A Metric Approach with Models*. Springer, New York, 1981.
- K. Miyazaki, *An Adventure in Multi-Dimensional Space*. Wiley, New York, 1986.
- E. E. Moise, *Elementary Geometry from an Advanced Standpoint (Second Edition)*. Addison-Wesley, Reading, Mass., 1974.
- E. E. Moise and F. L. Downs, *Geometry*. Addison-Wesley, Reading, Mass., 1964.
- J. Montesinos, *Classical Tessellations and Three-Manifolds*. Springer, New York, 1987.
- R. Moore (*ed.*), *The Dell Book of Logic Problems*. Dell, New York, 1984.
- R. Moore (*ed.*), *The Dell Book of Logic Problems #2*. Dell, New York, 1984.
- F. M. Morgan and W. E. Breckenridge, *Plane Geometry (Revised Edition)*. Houghton Mifflin, Cambridge, Mass., 1957.
- J. Murtha and E. Willard, *Linear Algebra and Geometry*. Holt, Rinehart, and Winston, New York, 1969.

N

- National Council of Teachers of Mathematics, *A Source Book of Mathematical Applications (NCTM Seventeenth Yearbook)*. Columbia University Teachers College, New York, 1942.
- E. D. Nering, *Linear Algebra and Matrix Theory (Second Edition)*. Wiley, New York, 1969.
- E. P. Northrop, *Riddles in Mathematics*. Van Nostrand, New York, 1944.

O

- A. Oldknow, *Microcomputers in Geometry*. Wiley, New York, 1987.

P

- H. O. Peitgen and P. H. Richter, *The Beauty of Fractals*. Springer, New York, 1986.
- H. O. Peitgen, D. Saupe, and F. v. Haeseler, *Cauchy's problem and Julia sets*, *Mathematical Intelligencer* 6 No. 2 (1984), 11–20.
- M. A. Penna and R. R. Patterson, *Projective Geometry and Its Applications to Computer Graphics*. Prentice-Hall, Englewood Cliffs, N. J., 1986.
- R. Penrose, *The geometry of the universe*, *Mathematics Today: Twelve Informal Essays* (ed. by L. A. Steen), 83–125. Vintage Books, New York, 1980.
- H. Perfect, *Topics in Geometry*, *Commonwealth and International Library No. 142 (Maths. Div. Vol. 7)*. Pergamon, London, 1963.
- I. Peterson, *Escape into chaos*, *Science News* 125 (1984), 328–329.
- I. Peterson, *Three bites in a doughnut*, *Science News* 127 (1985), 168–169.

A. S. Posamentier, *Excursions in Advanced Euclidean Geometry (Revised Edition)*. Addison-Wesley, Reading, Mass., 1984.

A. S. Posamentier and C. T. Salkind, *Challenging Problems in Geometry 1*, Macmillan Mathematics Supplements. Macmillan, New York, 1970.

A. S. Posamentier and J. Stepelman, *Teaching Secondary School Mathematics: Techniques and Enrichment Units*. Merrill, Columbus, Ohio, 1981.

H. Preckur, *Affine Abbildungen - Eine Einführung in die Abbildungsgeometrie*, Mentor-Lernhilfe Bd. 59. Mentor-Verlag, Munich, 1982.

W. Prenowitz and M. Jordan, *Basic Concepts of Geometry*. Blaisdell, New York, 1965.

R

E. G. Rees, *Notes on Geometry*. Springer, New York, 1982.

R. Rhoad, G. Milauskas, and R. Whipple, *Geometry for Enjoyment and Challenge (Revised Edition)*. McDougall, Littell, and Company, Evanston, Ill., 1984.

I. Richards, *Impossibility*, *Mathematics Magazine*, Vol. 48 (1975), 249–262.

J. L. Richards, *Mathematical Visions: The Pursuit of Geometry in Victorian England*. Academic Press, San Diego, Calif., 1988.

L. A. Ringenberg and R. S. Presser, *Geometry*. Benzinger/Wiley, New York, 1971.

M. F. Roszkopf, H. Sitomer, and G. Lenchner, *Modern Mathematics — Geometry*. Silver Burdett, Morristown, N. J., 1966.

B. A. Rozenfel'd, *A History of Non-Euclidean Geometry*, *Studies in the History of Mathematics and Physical Science* Vol. 12 (transl. from Russian by B. Abromowich). Springer, New York, 1988.

R. Rucker, *Geometry, Relativity and the Fourth Dimension*. Dover, New York, 1977.

R. Rucker, *The Fourth Dimension*. Houghton Mifflin, Boston, 1984.

W. Rudin, *Principles of Mathematical Analysis (Third Edition)*. McGraw-Hill, New York, 1976.

P. J. Ryan, *Euclidean and non-Euclidean Geometry: An Analytic Approach*. Cambridge University Press, New York, 1986.

H. J. Ryser, *Combinatorial Mathematics*, *Carus Mathematical Monographs* No. 14. Wiley, New York, 1963.

S

V. Sanford, *A Short History of Mathematics*. Houghton- Mifflin, Boston, 1930.

J. F. Schacht, R. C. McLennan, and A. L. Griswold, *Contemporary Geometry*. Holt, Rinehart, and Winston, New York, 1962.

H. Schaal and E. Glassner, *Lineare Algebra und Geometrie*, Bd. III: *Aufgaben mit Lösungen (2. durchgesehene Auflage)*. Vieweg, Braunschweig, 1981.

E. Scholz, *Geschichte des Mannigfaltigkeitsbegriffs von Riemann bis Poincare*. Birkhäuser, Boston, 1980.

A. Schultze, *The Teaching of Mathematics in Secondary Schools*. Macmillan, New York, 1927.

- S. Schuster, *Elementary Vector Geometry*. Wiley, New York, 1962.
- P. Scott, *The geometries of 3-manifolds*, Bulletin of the London Mathematical Society 15 (1983), 401–487.
- B. Senechal, *Géométrie classique et mathématiques modernes*, Actualités Scientifiques et Industrielles No. 1398. Hermann, Paris, 1979.
- B. Senechal, *Groupes et géométries*, Actualités Scientifiques et Industrielles No. 1399. Hermann, Paris, 1979.
- C. Series, *Non-Euclidean geometry, continued fractions, and ergodic theory*, Mathematical Intelligencer 4 (1982), 24 – 31.
- F. E. Seymour and P. J. Smith, *Plane Geometry*. Macmillan, New York, 1945.
- J. Shin, *Are circumscribable quadrilaterals always inscribable?*, Mathematics Teacher 73 (1980), 371–372.
- F. Sigrist, *Sphere packing (Second Report on the French Museum Competition)*, Mathematical Intelligencer 5 No. 3 (1983), 34–38.
- G. A. Silver and M. Silver, *Simplified BASIC Programming for Microcomputers*. Harper and Row, New York, 1984,
- J. R. Smart, *Modern Geometries (Third Edition)*. Brooks-Cole, Monterey, Calif., 1987.
- D. Smith, M. Eggen, and R. St. Andre, *A Transition to Advanced Mathematics*. Brooks/Cole, Monterey, Calif., 1983.
- R. R. Smith and J. F. Ulrich, *Plane Geometry*. World Book, Yonkers, N.Y., 1956.
- A. Soifer, *Mathematics as Problem Solving*. Center for Excellence in Mathematical Education, Colorado Springs, Co., 1988
- M. A. Sobel, E. M. Maletsky, N. Golden, N. Lerner, and L.S. Cohen, *Harper & Row Geometry*. Scribner Educational Publishers and Macmillan, New York, 1986.
- D. M. Y. Somerville, *An Introduction to the Geometry of N Dimensions*. Dover, New York, 1958.
- Y. and R. Sortais, *La géométrie du triangle (Exercices résolus)*, Actualités Scientifiques et Industrielles No. 1419. Hermann, Paris, 1987.
- K. Sowell, *Taxicab geometry revisited*, Mathematics Magazine Vol. 62 (1989), 238–247.
- M. Spivak, *A comprehensive Introduction to Differential Geometry, Volume 3*. Publish or Perish, Berkeley, California, 1975.
- L. A. Steen, *Unsolved Problems in Geometry*, Science News Vol. 115 No.25 (June 23, 1979), 412–413; reprinted, Mathematics Teacher 73 (1980), 366–369.
- J. Stepelman, *Milestones in Geometry*, Macmillan Mathematics Supplements. Macmillan, New York, 1970.
- J. J. Stoker, *Differential Geometry, Pure and Applied Mathematics, Vol. 20*. Wiley-Interscience, New York, 1969.
- P. Suppes, *Introduction to Logic*, University Series in Undergraduate Mathematics. Van Nostrand, Princeton, 1957.

T

- G. Taubes, *Everything's now tied to strings*, Discover Vol. 7 No. 11 (November, 1986), 34–56.

G. Taubes, *What happens when Hubris meets Nemesis*, Discover Vol. 8 No. 7 (July, 1987), 66–77.

C. Tisseron, Géométries affines, projectives, et euclidiennes, Actualités Scientifiques et Industrielles No. 1408. Hermann, Paris, 1983.

T. M. Thompson, From Error-Correcting Codes through Sphere Packings to Simple Groups, Carus Mathematical Monographs No. 21. Mathematical Association of America, Washington, D. C., 1983.

W. P. Thurston, *Three-dimensional manifolds, Kleinian groups, and Hyperbolic Geometry*, Bulletin of the American Mathematical Society, New Series, 6 (1982), 357–381.

W. P. Thurston and J. R. Weeks, *The mathematics of three-dimensional manifolds*, Scientific American Vol. 251 No. 1 (July, 1984), 108–120.

R. Torretti, Philosophy of Geometry from Riemann to Poincaré, Episteme Vol. 7. D. Reidel, Boston, 1978.

R. J. Trudeau, The Non-Euclidean Revolution. Birkhäuser, Boston. 1987.

U

J. F. Ulrich, F. F. Czarneck, and D. L. Guibault, Geometry. Harcourt Brace Jovanovich, New York, 1978.

J. F. Ulrich and T. N. Payne, Geometry. Harcourt, Brace, and World, New York, 1969.

K. Ulshofer, Geometrie 9. Schuljahr (Sekundarstufe I), Manz Lernhilfen 344. Manz Verlag, Munich, 1979.

University of Chicago College Mathematics Staff, Concepts and Structure of Mathematics. Syllabus Division, University of Chicago Press, Chicago, 1954.

University of Illinois Committee on School Mathematics, Introduction to Deductive Geometry, Units 1 and 2. University High School, Urbana, Illinois, 1957.

V

I. Vaisman, Foundations of 3-dimensional Euclidean Geometry, Pure and Applied Mathematics Vol. 56. Marcel Dekker, New York, 1980.

H. E. Vaughan and S. Szabo, A Vector Approach to Euclidean Geometry (Teacher's Edition), Volume 1. University of Illinois Committee on School Mathematics. Macmillan, New York, 1971.

H. E. Vaughan and S. Szabo, A Vector Approach to Euclidean Geometry (Teacher's Edition), Volume 2. University of Illinois Committee on School Mathematics. Macmillan, New York, 1973.

J. Verdina, Geometry. Merrill, Columbus, Ohio, 1975.

L. Viennot, La raisonnement spontané en dynamique élémentaire, Actualités Scientifiques et Industrielles No. 1384. Hermann, Paris, 1979.

W

B. L. van der Waerden, Algebra, Volume I (Seventh Edition, English Transl. by F. Blum and J. R. Schulenberger). Ungar, New York, 1970.

B. L. van der Waerden, *Über die Seltenheit der Gleichungen mit Affekt*, Mathematische Annalen 109 (1933), 13–16.

P. L. Wantzel, *Recherches sur les moyens de reconnaître si un Problème de Geometrie peut se resoudre avec la règle et la compas*, Journal de mathématiques pures et appliquées (Sér. 1) 2 (1837), 366–372.

S. Warner, *Classical Modern Algebra*. Prentice-Hall, Englewood Cliffs, N. J., 1971.

J. R. Weeks, *The Shape of Space*, Dekker Series in Pure and Applied Mathematics, Vol. 96. Marcel Dekker, New York, 1985.

E. Weiss, *First Course in Algebra and Number Theory*. Academic Press, New York, 1971.

S. Weiss, *Geometry: Content and Strategy for Teachers*. Bogden and Quigley, Tarrytown, N. Y., 1972.

A. M. Welchons and W. R. Krickenberg, *Solid Geometry (Revised Edition)*. Ginn, Boston, 1950.

A. N. Whitehead, *The Axioms of Descriptive Geometry*, Cambridge Tracts in Mathematics and Mathematical Physics No. 5. Cambridge University Press, Cambridge, U. K., 1905.

T. A. Wieting, *The Mathematical Theory of Chromatic Plane Ornaments*, Dekker Series in Pure and Applied Mathematics Vol. 71. Marcel Dekker, New York, 1982.

E. P. Wigner, *The unreasonable effectiveness of mathematics in the natural sciences*, *The Spirit and Uses of the Mathematical Sciences*, 123–140. McGraw-Hill, New York, 1969.

T. J. Willmore, *Introduction to Differential Geometry*. Oxford University Press, New York, 1959.

R. Winger, *Introduction to Projective Geometry*. Dover, New York, 1962.

H. E. Wolfe, *Introduction to Non-Euclidean Geometry*. Holt, New York, 1945.

C. R. Wylie, *Foundations of Geometry*. McGraw-Hill, New York, 1964.

Y

R. C. Yates, *The Trisection Problem*, *Classics in Mathematics Education*. National Council of Teachers of Mathematics, Reston, Va., 1971.