Bibliography

[AD86] H. Abelson and A. Disessa, *Turtle geometry: The computer as a medium for exploring mathematics*, Artificial Intelligence Series, MIT Press, 1986.

[AH22] S. Andrilli and D. Hecker, *Elementary linear algebra*, Academic Press, 2022.

[Ahr01] W Ahrens, *Mathematische unterhaltungen und spiele*, Leipzig, B.G. Teubner, 1901.

[All78] Dennis Allison, *Quick and dirty functions for basic*, Dr. Dobb's Journal **3** (1978), no. 9.

[AM10] Anurag Agarwal and James Marengo, *The locus of the focus of a rolling parabola*, The College Mathematics Journal **41** (2010), no. 2, pp. 129–133.

[ASS96] H. Abelson, G.J. Sussman, and J. Sussman, *Structure and interpretation of computer programs, second edition*, MIT Electrical Engineering and Computer Science, MIT Press, 1996.

[Bar12] M. F. Barnsley, *Fractals everywhere*, 3rd ed ed., Dover Pub., 2012.

[BC87] W.W.R. Ball and H.S.M. Coxeter, *Mathematical recreations and essays*, Dover Recreational Math Series, Dover Pub., 1987.

[BCG04] E.R. Berlekamp, J.H. Conway, and R.K. Guy, *Winning ways for your mathematical plays, volumes 1-4*, AK Peters/CRC Recreational Mathematics Series, CRC Press, 2004.

[Bea06] J.D. Beasley, *The mathematics of games*, Dover books on mathematics, Dover Pub., 2006.

[Ben88] J.L. Bentley, *More programming pearls: Confessions of a coder*, Addison-Wesley, 1988.

[Ben00] ———, *Programming pearls*, 2nd ed ed., Addison-Wesley, 2000.

[BFB16] Richard L. Burden, J. Douglas. Faires, and Annette M. Burden, *Numerical analysis*, 10th ed ed., Cengage Learning, 2016.

[BH19] J.K. Blitzstein and J. Hwang, *Introduction to probability*, 2nd ed ed., Chapman & Hall/CRC Texts in Statistical Science, CRC Press, 2019.

[BHS93] G. Blom, L. Holst, and D. Sandell, *Problems and snapshots from the world of probability*, Springer New York, 1993.

[Bla16] Viktor Blasjö, *How to find the logarithm of any number using nothing but a piece of string*, The College Mathematics Journal **47** (2016), no. 2, 95–100.

[Bol12] B. Bold, *Famous problems of geometry and how to solve them*, Dover Books on Mathematics, Dover Publications, 2012.

[Bri89] K. M Briggs, *How to calculate the Feigenbaum constants on your pc*, Aust. Math Soc. Gazette **16** (1989), 89—92.

[Bro88] R. Bronson, *Schaum's outline of theory and problems of matrix operations*, McGraw-Hill, 1988.

[BS09] J. Bell and B. Stevens, *A survey of known results and research areas for n-queens*, Discrete Math. **309** (2009), no. 1, 1–31.

[BS24] J. Bryant and C. Sangwin, *How round is your circle?: Where engineering and mathematics meet*, Princeton University Press, 2024.

[BT08] D. Bertsekas and J.N. Tsitsiklis, *Introduction to probability*, Athena Scientific optimization and computation series, Athena Scientific, 2008.

[CLRS22] T.H. Cormen, C.E. Leiserson, R.L. Rivest, and C. Stein, *Introduction to algorithms, fourth edition*, MIT Press, 2022.

[Dar04] D. Darling, *The universal book of mathematics: From abracadabra to zeno's paradoxes*, Wiley, 2004.

[dBOCvKO08] M. de Berg, O. Otfried Cheong, M. van Kreveld, and M Overmars, *Computational geometry: Algorithms and applications*, 3rd ed ed., Springer, 2008.

[Dij76] E.W. Dijkstra, *A discipline of programming*, Prentice-Hall series in Automatic Computation, Prentice-Hall, 1976.

[DKL98] Erik Bjørnager Dam, Martin Koch, and Martin Lillholm, *Quaternions, interpolation and animation*, Technical report diku-tr—98/5, University of Copenhagen Universitetsparken, July 1998.

[Dom63] A.P. Domoryad, *Mathematical games and pastimes: Popular lectures in mathematics*, Macmillan, London, 1963.

[Dox10] A. Doxiadis, *Uncle Petros and Goldbach's conjecture: A novel of mathematical obsession*, Bloomsbury Pub., 2010.

[DS76] L.E. Dubins and L.J. Savage, *How to gamble if you must: Inequalities for stochastic processes*, Dover Books on Mathematics, Dover Pub., 1976.

[Dun90] W. Dunham, *Journey through genius: Great theorems of mathematics*, A Penguin book, Wiley, 1990.

[Ebe10] David Eberly, *Quaternion algebra and calculus*, `https://www.geometrictools.com/Documentation/Quaternions.pdf`, 2010, [Accessed 14-08-2025].

[Eng76] A. Engel, *Wahrscheinlichkeitsrechnung und statistik, band.2*, Klett Studienbücher, Stuttgart, 1976 (de).

[Eng84] ———, *Elementary mathematics from an algorithmic standpoint*, Keele Mathematical Education Pub., 1984.

[Eng87] ———, *Stochastik*, Klett, Stuttgart, 1987 (de).

[Eps13] Richard A. Epstein, *The theory of gambling and statistical logic*, 2nd ed ed., Elsevier/Academic Press, 2013.

[Fal13] K. Falconer, *Fractal geometry: Mathematical foundations and applications*, John Wiley, 2013.

[Fee00] T.G. Feeman, *Portraits of the earth: A mathematician looks at maps*, Mathematical world, American Mathematical Soc., 2000.

[Fel68] W. Feller, *An introduction to probability theory and its applications, volume 1*, 3rd ed ed., John Wiley, 1968.

[Fel71] ———, *An introduction to probability theory and its application, volume ii*, 2nd ed ed., John Wiley, 1971.

[FU16] M. Frame and A. Urry, *Fractal worlds: Grown, built, and imagined*, Yale Univ. Press, 2016.

[Gar61] M. Gardner, *The second Scientific American book of mathematical puzzles and diversions*, An Essandess paperback, Touchstone, 1961.

[Gar71] ———, *Sixth book of mathematical games from Scientific American*, Scribner, New York, NY, USA, 1971.

[Gar75] ———, *Mathematical carnival*, Random House, 1975.

[Gar88] ———, *Riddles of the sphinx: And other mathematical puzzle tales*, New mathematical library, Mathematical Assoc. of America, 1988.

[Gar97] ———, *Penrose tiles to trapdoor ciphers: And the return of Dr. Matrix*, MAA spectrum, Mathematical Assoc. of America, 1997.

[Gar20] ———, *Knotted doughnuts and other mathematical entertainments*, American Mathematical Soc., 2020.

[GH97] J. Gullberg and P. Hilton, *Mathematics from the birth of numbers*, WW Norton, 1997.
[GKP94] R.L. Graham, D.E. Knuth, and O. Patashnik, *Concrete mathematics: A foundation for computer science*, 2nd ed ed., Addison-Wesley, 1994.
[Gol81] Solomon W. Golomb, *Shift register sequences*, Aegean Park Press, 1981.
[Gol91] D. Goldberg, *What every computer scientist should know about floating-point arithmetic*, ACM Computing Surveys **23** (1991), no. 1, 5–48.
[Gri81] D. Gries, *The science of programming*, Springer Heidelberg, 1981.
[GS97] C.M. Grinstead and J.L. Snell, *Introduction to probability*, Open Textbook Library, American Mathematical Society, 1997.
[Guy04] R.K. Guy, *Unsolved problems in number theory*, Problem Books in Mathematics, Springer New York, 2004.
[Har68] J.F. Hart, *Computer approximations*, SIAM Series, Wiley, 1968.
[Har01] Suzanne Harper, *Exploring infinite series using Baravelle spirals*, Virginia Mathematics Teacher **27** (2001), 46–54.
[Hav19] Julian Havil, *Curves for the mathematically curious: An anthology of the unpredictable, historical, beautiful, and romantic*, Princeton University Press, 2019.
[HCV99] D. Hilbert and S. Cohn-Vossen, *Geometry and the imagination*, 2nd ed ed., AMS Chelsea Pub., 1999.
[Hea26] P. J. Heawood, *Comparison between rhumb-line and great-circle courses*, The Mathematical Gazette **13** (1926), no. 183, 137–145.
[Hig02] P. Higgins, *Mathematics for the imagination*, Popular science, OUP Oxford, 2002.
[HK78] I. N. Herstein and I. Kaplansky, *Matters mathematical*, 2nd ed ed., Chelsea Pub., 1978.
[Hof99] D.R. Hofstadter, *Gödel, Escher, Bach: An eternal golden braid*, 20th anniversary ed ed., Basic Books, 1999.
[Hog93] L. Hogben, *Mathematics for the million: How to master the magic of numbers*, W.W. Norton, 1993.
[Hon70] R. Honsberger, *Ingenuity in mathematics*, New Mathematical Library, no. 23, Mathematical Assoc. of America, 1970.
[HS79] P. Holgate and H. Solomon, *Geometric probability*, Journal of the Royal Statistical Society. Series A **142** (1979), no. 3, 386.
[HUA83] J.E. Hopcroft, J.D. Ullman, and A.V. Aho, *Data structures and algorithms*, Addison-Wesley, 1983.
[Hug14] J.F. Hughes, *Computer graphics: Principles and practice*, The systems programming series, Addison-Wesley, 2014.
[HW92] Leon Hall and Stan Wagon, *Roads and wheels*, Mathematics Magazine **65** (1992), no. 5, 283–301.
[HWHBS08] G.H. Hardy, E.M. Wright, D.R. Heath-Brown, and J. Silverman, *An introduction to the theory of numbers*, Oxford mathematics, OUP Oxford, 2008.
[IR90] K. Ireland and M.I. Rosen, *A classical introduction to modern number theory*, 2nd ed ed., Graduate Texts in Mathematics, Springer, 1990.
[Ise92] C. Isenberg, *The science of soap films and soap bubbles*, Dover books explaining science, Dover Publications, 1992.
[Jac69] K. Jacobs, *Selecta mathematica i*, Springer-Verlag, 1969.
[KG81] D. A. Klarner and M. Gardner (eds.), *The mathematical Gardner*, Prindle, Weber and Schmidt, 1981.
[Kiu13] J. Kiusalaas, *Numerical methods in engineering with python 3*, Cambridge University Press, 2013.
[Kle12] F. Klein, *Elementary mathematics from an advanced standpoint: Geometry*, Dover Books on Mathematics, Dover Pub., 2012.
[KN01] E. Kasner and J.R. Newman, *Mathematics and the imagination*, Dover Books on Mathematics Series, Dover Pub., 2001.

[Knu96] D.E. Knuth, *Selected papers on computer science*, CSLI Lecture Notes, no. No. 59, Cambridge Univ. Press, 1996.

[Knu97] ———, *The art of computer programming*, 3rd ed ed., vol. 1, 2, 3, Addison-Wesley, 1997.

[Kre10] E. Kreyszig, *Advanced engineering mathematics*, John Wiley & Sons, 2010.

[KS83] J.G. Kemeny and J.L. Snell, *Finite markov chains: With a new appendix "generalization of a fundamental matrix"*, Undergraduate Texts in Mathematics, Springer New York, 1983.

[KST74] J.G. Kemeny, J.L. Snell, and G.L. Thompson, *Introduction to finite mathematics*, Prentice-Hall mathematics series, Prentice-Hall, 1974.

[Kuc94] M.E. Kuczma, *Problems: 144 problems of the Austrian-Polish mathematics competition, 1978-1993*, Academic Distribution Center, 1994.

[Len11] E. Lengyel, *Mathematics for 3D game programming and computer graphics*, third ed., Cengage Learning, 2011.

[LG59] S. Loyd and M. Gardner, *Mathematical puzzles*, Dover Brain Games: Math Puzzles Series, no. Vol. 1, Dover Pub., 1959.

[LG60] ———, *More mathematical puzzles of Sam Loyd*, Dover Recreational Math Series, no. Vol. 2, Dover Pub., 1960.

[LH89] Cliff Long and Thomas Hern, *Graphing the complex zeros of polynomials using modulus surfaces*, The College Mathematics Journal **20** (1989), no. 2, 98–105.

[LLM21] D.C. Lay, S.R. Lay, and J.J. McDonals, *Linear algebra and its applications*, 6th ed ed., Pearson Education, 2021.

[Loc67] E.H. Lockwood, *A book of curves*, University Press, 1967.

[Lüt22] J. Lützen, *A history of mathematical impossibility*, OUP Oxford, 2022.

[Man67] B.B Mandelbrot, *How long is the coast of Britain*, Science **156** (1967), no. 3775, 636–638.

[Man83] ———, *The fractal geometry of nature*, vol. 173, Macmillan, 1983.

[Mao20] E. Maor, *Trigonometric delights*, Princeton University Press, 2020.

[Mar05] D. Marsh, *Applied geometry for computer graphics and CAD*, Springer Undergraduate Mathematics Series, Springer London, 2005.

[Mor99] M.E. Mortenson, *Mathematics for computer graphics applications*, Industrial Press, 1999.

[Nah07] P.J. Nahin, *Chases and escapes: The mathematics of pursuit and evasion*, Princeton Puzzlers, Princeton Univ. Press, 2007.

[Nah13] ———, *Digital dice: Computational solutions to practical probability problems*, Paradoxes, perplexities, and mathematical conundrums for the serious head scratcher, Princeton Univ. Press, 2013.

[Niv65] I. Niven, *Mathematics of choice: or, how to count without counting*, Anneli Lax New Mathematical Library, Random House, 1965.

[NZM91] I. Niven, H.S. Zuckerman, and H.L. Montgomery, *An introduction to the theory of numbers*, Wiley, 1991.

[Ogi68] C. Stanley Ogilvy, *A calculus notebook*, Prindle, Weber & Schmidt, Boston, 1968.

[Ogi90] C.S. Ogilvy, *Excursions in geometry*, Dover Books on Mathematics Series, Dover Publications, 1990.

[Old63] C.D. Olds, *Continued fractions*, Anneli Lax New Mathematical Library, vol. 9, Random House, 1963.

[Oli93] D. Olivastro, *Ancient puzzles: Classic brainteasers and other timeless mathematical games of the last ten centuries*, Random House Pub. Group, 1993.

[O'R98] J. O'Rourke, *Computational geometry in C*, Cambridge Tracts in Theoretical Computer Science, Cambridge Univ. Press, 1998.

[Ore17] O. Ore, *Invitation to number theory*, 2nd ed; revised and updated by john j. watkins and robin wilson ed., Anneli Lax New Mathematical Library, American Mathematical Society, 2017.

[Pap20] S.A. Papert, *Mindstorms: Children, computers, and powerful ideas*, Basic Books, 2020.

[Ped83] D. Pedoe, *Geometry and the visual arts*, Dover Books on Mathematics Series, Dover Publications, 1983.

[Per17] D. Perkins, *ϕ, π, e and i*, MAA spectrum, MAA, The Mathematical Assoc. of America, 2017.

[Pic95] C.A. Pickover, *Keys to infinity*, W. H. Freeman, 1995.

[Pic01] _____, *Wonders of numbers: Adventures in mathematics, mind, and meaning*, Oxford Univ., 2001.

[Pol20] G. Polya, *Mathematics and plausible reasoning, volume 1: Induction and analogy in mathematics*, Princeton Univ. Press, 2020.

[PR09] W.B. Poucher and M.A. Revilla, *From Baylor to Baylor: 1991-2006 acm-icpc world finals*, Lulu.com, 2009.

[PS89] I. Pressman and D. Singmaster, *The jealous husbands and the missionaries and cannibals*, The Mathematical Gazette **73** (1989), 73 – 81.

[PTVF92] William H. Press, Saul A. Teukolsky, William T. Vetterling, and Brian P. Flannery, *Numerical recipes in C: The art of scientific computing*, 2 ed., Cambridge University Press, 1992.

[Rén87] A. Rényi, *A diary on information theory*, Wiley Series in Probability and Mathematical Statistics, Wiley, 1987.

[RND77] E.M. Reingold, J. Nievergelt, and N. Deo, *Combinatorial algorithms: Theory and practice*, Prentice Hall, 1977.

[RND10] S.J. Russell, P. Norvig, and E. Davis, *Artificial intelligence: A modern approach*, Prentice Hall series in AI, Prentice Hall, 2010.

[Rob60] Gerson B. Robison, *Rockers and rollers*, Mathematics Magazine **33** (1960), no. 3, 139–144.

[San04] L.A. Santaló, *Integral geometry and geometric probability*, 2nd ed ed., Cambridge Mathematical Library, Cambridge Univ. Press, 2004.

[Sha78] D. Shanks, *Solved and unsolved problems in number theory*, 2nd ed ed., Chelsea Pub., 1978.

[Sho85] Ken Shoemake, *Animating rotation with quaternion curves*, ACM SIGGRAPH Computer Graphics **19** (1985), no. 3, 245–254.

[Sie64] W. Sierpinski, *Elementary theory of numbers*, PWN- Polish Scientific Pub., 1964.

[Sil12] J.H. Silverman, *A friendly introduction to number theory*, 4th ed ed., Pearson, 2012.

[Sim92] G.F. Simmons, *Calculus gems: Brief lives and memorable mathematics*, McGraw-Hill, 1992.

[Sol78] H. Solomon, *Geometric probability*, CBMS-NSF Regional Conference Series in Applied Mathematics, Society for Industrial and Applied Mathematics, 1978.

[SR12] Javier Sánchez-Reyes, *The catenary as roulette*, The College Mathematics Journal **43** (2012), no. 3, pp. 216–219.

[Sta12] R.P. Stanley, *Enumerative combinatorics*, Cambridge Studies in Advanced Mathematics, vol. 1, Cambridge Univ. Press, 2012.

[Ste99] H. Steinhaus, *Mathematical snapshots*, Dover Recreational Math Series, Dover Publications, 1999.

[Sti10] J. Stillwell, *Mathematics and its history*, 3rd ed ed., Undergraduate Texts in Mathematics, Springer New York, 2010.

[Sto18] Paul K. Stockmeyer, *4. the tower of hanoi for humans*, Research in Games, Graphs, Counting, and Complexity, Volume 2, pp. 52–70, Princeton University Press, 2018.

[Str91] G. Strang, *Calculus*, 3rd ed ed., Open Textbook Library, Wellesley-Cambridge Press, 1991.

[Str15] S.H. Strogatz, *Nonlinear dynamics and chaos: with applications to physics, biology, chemistry and engineering*, 2nd ed ed., Westview Press, 2015.

[SW11] R. Sedgewick and K. Wayne, *Algorithms*, Addison-Wesley, 2011.

[TFW96] G.B. Thomas, R.L. Finney, and M.D. Weir, *Calculus and analytical geometry*, 9th ed., Addison-Wesley, 1996.

[Tho64] G. (Director) Thomas, *Carry on cleo*, Anglo Amalgamated Film, 1964.

[VB13] G. Van Brummelen, *Heavenly mathematics: the forgotten art of spherical trigonometry*, Princeton University Press, 2013.

[Vor11] N.N Vorobév, *Fibonacci numbers*, Dover Books on Mathematics, Dover Pub, 2011.

[Wag99] Stan Wagon, *The ultimate flat tire*, Math Horizons **6** (1999), no. 3, 14–17.

[Wag10] S. Wagon, *Mathematica in action*, 3rd ed ed., Springer, 2010.

[Weg16] Elias Wegert, *Visual exploration of complex functions*, Mathematical Analysis, Probability and Applications – Plenary Lectures (Tao Qian and Luigi G. Rodino, eds.), Springer International Publishing, 2016, pp. 253–279.

[Yat47] R.C. Yates, *A handbook on curves and their properties*, J.W. Edwards, 1947.

[YG88] D.M. Young and R.T. Gregory, *A survey of numerical mathematics*, A Survey of Numerical Mathematics, no. v. 1, Dover Pub., 1988.

[Zwi96] Daniel Zwillinger, *CRC standard mathematical tables and formulae*, 30 ed., CRC Press, 1996.