Each item in this index is listed under the topics for which it might be used in the classroom or for enrichment after the topic has been presented. Within each topic entries are listed in chronological order of publication. Each entry is given in the form:

**Title, author, volume:issue, year, page range, [C or F], [other topic cross-listings]**

where C indicates a classroom capsule or short note and F indicates a Fallacies, Flaws and Flimflam note. If there is nothing in this position the entry refers to an article unless it is a book review.

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Groupoid Cardinality and Egyptian Fractions, Julia E. Bergner and Christopher D. Walker, 46:2, 2015, 122-129, 9.3, 9.4
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The Irrationality of Certain Numbers, Peter A. Lindstrom, 1:1, 1970, 30-31, 9.3
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A Geometric Approach to the Orders of Infinity, Harold L. Schoen, 3:2, 1972, 74-76, C, 9.5
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0.4 Analytic geometry

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5 Calculus

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On the Indeterminate Form 0^0, Leonard J. Lipkin, 34:1, 2003, 55-56, C
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5.2 Integration

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Application of a Generalized Fibonacci Sequence, Curtis Cooper, 15:2, 1984, 145-146, C, 7.2
The Electronic Spreadsheet and Mathematical Algorithms, Deane E. Arganbright, 15:2, 1984, 148-157, 4.1, 7.3, 9.6
Another Look at \( x^{(1/x)} \), Norman Schaumberger, 15:3, 1984, 249-250, C, 5.1.2
The Factorial Triangle and Polynomial Sequences, Steven Schwartzman, 15:5, 1984, 424-426, C, 0.2, 6.3
Arithmetic Progressions and the Consumer, John D. Baildon, 16:5, 1985, 395-397, C, 0.8
Using the Finite Difference Calculus to Sum Powers of Integers, Lee Zia, 22:4, 1991, 294-300, 5.2.1, 5.4.2
A Sequence Related to the Harmonic Series, E. Ray Bobo, 26:4, 1995, 308-310, C
Another Way to Graph a Sequence, David Olson, 27:3, 1996, 208-209, C
Proofs Without Words: Galileo's Ratios Revisited, Alfinio Flores, 36:3, 2005, 198, C, 9.5
Sequence converging to Pi, Andrew Cusumano, 37:2, 2006, 120, C
A Geometric Look at Sequences that Converge to Euler's Constant, Duane W. DeTemple, 37:2, 2006, 128-131, C
Sums of Integer Powers via the Stolz-Cesaro Theorem, Sidney H. Kung, 40:1, 2009, 42-44, C, 3.2
The V-flex, Triangle Orientation, and Catalan Numbers in Hexaflexagons, Ionut E. Iacob, Bruce McLean, and Hua Wang, 43:1, 2012, 6-10, 0.3, 3.1, 3.2, 9.2, 9.8
Carryless Arithmetic Mod 10, David Applegate, Marc LeBrun, and N. J. A. Sloane, 43:1, 2012, 43-50, 0.1, 9.2, 9.4
A Closer Look at Bobo's Sequence, Daniel T. Clancy and Steven J. Kifowit, 45:3, 2014, 199-206, 9.5
Proof Without Words: Limit of a Recursive Arithmetic Mean, Angel Plaza, 45:5, 2014, 364, C, 0.1, 5.1.1
A Squeeze for Two Common Sequences that Converge to e, Branko Curgus, 45:5, 2014, 391-392, C, 5.1.1
Sequences of Power Lines, Ricardo Alfaro, 46:2, 2015, 113-120, 0.2, 0.7, 3.2, 5.1.1, 9.2, 9.3
Proof Without Words: Nested Square Roots, Roger B. Nelsen, 48:3, 2017, 204, C, 0.2
Proof of a Conjecture of Merca on an Average of Square Roots, John Zacharias, 49:5, 2018, 342-345, 9.5
Bringing Calculus into Discrete Math via the Discrete Derivative, Christopher J. Catone, 50:1, 2019, 21-27, 3.2, 3.3, 5.1.2, 5.1.3
Greedy Queens on an Infinite Chessboard, William Paulsen, 49:4, 2019, 288-294, 5.1.1, 9.2
Pinpoint the Flitting Fly, Albert Natian, 49:5, 2019, 351-356, 9.10
Connected Subsets of an \( n \times 2 \) Rectangle, Samuel Durham and Tom Richmond, 51:1, 2020, 32-42, 3.2, 8.3, 9.7
A Fast-Growing Sequence Inspired by \( \text{TREE}(k) \), Kevin Y. Du, 51:1, 2020, 43-50, 3.1, 3.2
Discontinuous Functions as Limits of Compactly Supported Formulas, J. Marshall Ash, 51:5, 2020, 337-344, 9.5
The Sock Problem Revisited, William Paulsen, 52:3, 2021, 193-203, 3.1, 3.2, 6.3, 7.2, 9.6
Applications of Squeeze Theorem to Limiting Processes Involving Riemann Integration, Brian Becsi, Solomon Huang, Verenalei Schoenfeld, Bogdan D. Suceava & Ashley Thune-Aguayo, 52:3, 2021, 224-226, C, 5.2.9, 9.5
Being Rational About Algebraic Numbers, Matt David, Adam E. Parker, and Daniel A. N. Vargas, 52:5, 2021, 327-337, 4.1, 4.5, 6.3, 9.4, 9.6
The Equivalence of Definitions of the Natural Logarithm Function, Henry Ricardo, 53:3, 2022, 190-196, 2.2, 5.1.1, 5.3.2, 9.5

5.4.2 Numerical series (convergence tests and summation)

Encouraging Mathematical Inquisitiveness, Carl L. Main, 1:1, 1970, 32-36, 5.2.2
Telescoping Sums and the Summation of Sequences, G. Baley Price, 4:2, 1973, 16-29, 6.3
Calculus by Mistake, Louise S. Grinstein, 5:4, 1974, 49-53, C, 5.1.2, 5.1.4, 5.2.2, 5.2.3, 5.2.5, 5.2.10, 5.6.1, 5.7.2
A Precalculus Unit on Area Under Curves, Samuel Goldberg, 6:4, 1975, 29-35, 0.7
An Interesting Use of Generating Functions, Aron Pinker, 6:4, 1975, 39-45, 0.6, 9.5
A Helpful Device: or One More Use for Pascal's Triangle, Robert Rosenfeld, 8:3, 1977, 188-191, C, 0.9
A Coin Game, Thomas P. Dence, 8:4, 1977, 240-246, 9.9, 9.10
A Note on Infinite Series, Louise S. Grinstein, 9:1, 1978, 46-47, C
A Note on the Integral Test, Peter A. Lindstrom, 9:2, 1978, 105-106, C
On Sum-Guessing, Mangho Ahuja, 10:2, 1979, 95-99
The Sum of the Reciprocals of the Primes, W. G. Leavitt, 10:3, 1979, 198-199, C
Calculator-Demonstrated Math Instruction, George McCarty, 11:1, 1980, 42-48, 5.1.1, 5.2.2, 9.6
A Precalculus Approximation of \( n! \), Norman Schaumberger, 11:3, 1980, 202-204, C, 0.2
Some Sum of Sums, Gerald Lenz, 12:3, 1981, 208-209, C
Infinite Series Flow Chart for the Sum of \( a(n) \), Franklin Kemp, 13:3, 1982, 199, C
Taxes on Taxes, Thomas E. Eisner, 13:4, 1982, 266-269
The Sums of Zeros of Polynomial Derivatives, Michael W. Ecker, 13:5, 1982, 328-329, C, 0.7, 5.1.2
Closed-Form Formulas for Quasi-Geometric Series, Arthur C. Segal, 14:2, 1983, 118-122
On Sums of Powers of Natural Numbers, Myren Krom, 14:4, 1983, 349-351, C, 9.1
Instant Hindsight!, Norman Schaumberger, 14:4, 1983, 351, C
Evaluating $e^x$ Using Limits, Sheldon P. Gordon, 15:1, 1984, 63-65, 5.3.2
On Problems with Solutions Attainable in More Than One Way, Jean Pedersen and George Polya, 15:3, 1984, 319-322, 0.2, 0.4
Approximate Angle Trisection, David Gauld, 15:5, 1984, 420-422, 0.6
Inverse Functions, Ralph P. Boas, 16:1, 1985, 42-47, 5.2.1, 5.3.2
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Cantor's Disappearing Table, Larry E. Knop, 17:1, 1986, 66-70
Counterexamples to a Comparison Test for Alternating Series, J. Richard Morris, 17:2, 1986, 165-166, C
A Case of True Interest, Soo Tang Tan, 17:3, 1986, 247-248, C, 0.8
Another Approach to a Class of Slowly Diverging Series, Norman Schaumberger, 17:5, 1986, 417, C
Computer Algebra Systems in Undergraduate Mathematics, Don Small and John Hosack and Kenneth Lane, 17:5, 1986, 423-433, 1.2, 5.1.4, 5.1.5, 5.2.2
The Bernoullis and the Harmonic Series, William Dunham, 18:1, 1987, 18-23, 2.2
$\pi/4$ and $\ln 2$ Recursively, Frank Burk, 18:1, 1987, 51, C, 5.2.5
Behold! Sums of Arctan, Edward M. Harris, 18:2, 1987, 141, C
Computing $\pi$, Harley Flanders, 18:3, 1987, 230-235, 5.2.3, 8.1
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Evaluating the Sum of the Series $\sum (k^n / M^k)$, Alan Gorfin, 20:4, 1989, 329-331, C
Sum the Alternating Harmonic Series, Dave P. Kraines and Vivian Y. Kraines and David A. Smith, 20:5, 1989, 433-435, C, 1.2
Using the Finite Difference Calculus to Sum Powers of Integers, Lee Zia, 22:4, 1991, 294-300, 5.2.1, 5.4.1
The Sum is 1, John H. Mathews, 22:4, 1991, 322, C
Summation by Parts, Gregory Fredricks and Roger B. Nelsen, 23:1, 1992, 39-42, C, 5.1.2, 5.4.1, 9.3
Summing Geometric Series by Holding a Tournament, Vincent P. Schielack, 23:3, 1992, 210-211, C
Six Ways to Sum a Series, Dan Kalman, 24:5, 1993, 402-421, 9.5
The Series $n^m$ times $x^n$ and a Pascal-like Triangle, David Neal, 25:2, 1994, 99-101
Sum of Squares via the Centroid, Sydney H. Kung, 25:2, 1994, 111, C
Approaches to the Formula for the nth Fibonacci Number, Russell Jay Hendel, 25:2, 1994, 139-142, C, 0.2, 4.5, 9.3, 9.5
FFF #76. Telescoping Series, Eleanor A. Maddock, 25:4, 1994, 309, F
FFF. Pi is approximately $\ln 4$, Frank Burk, 25:4, 1994, 311, F
Sum of Alternating Series (proof by picture), Guanshen Ren, 26:3, 1995, 213, 0.9
Divergence of a Series (by picture), Sidney H. Kung, 26:4, 1995, 301, C
Sums of General Geometric Series (by picture), John Mason, 26:5, 1995, 381, C
FFF #111. The Bouncing Ball, Daniel J. Scully, 27:5, 1996, 372-373, F
Some Sums of Some Significance, Martha E. Dasef and Steven M. Kautz, 28:1, 1997, 52-55, C
Using Simpson's Rule to Approximate Sums of Infinite Series, Rick Kreminski, 28:5, 1997, 368-376
Can You Sum This Familiar Series (Proof Without Words), Dennis Gittinger, 28:5, 1997, 393, C
Sum of Cubes (proof without words), Alfinio Flores, 29:1, 1998, 61, C
Who Cares if \( x^2 + 1 = 0 \) Has a Solution?, Viet Ngo and Saleem Watson, 29:2, 1998, 141-144, C, 0.7, 5.2.5, 6.2
Harmonic Series, Andrew Cusumano, 30:1, 1999, 34, C
Gabriel’s Wedding Cake, Julian F. Fleron, 30:1, 1999, 35-38, 5.2.10
FFF #141. Evaluation of a Sum, Joe Howard, 30:2, 1999, 130-131, F
Natural Logarithms via Long Division, Frank Burk, 30:4, 1999, 309-311, C
Things I Have Learned at the AP Reading, Dan Kennedy, 30:5, 1999, 346-355, 0.2, 5.1.1, 5.1.2, 5.2.1, 5.2.6, 6.1
The Series for \( e \) via Integration, Marc Chamberland, 30:5, 1999, 397, C
Summing Series via Integrals, Frank Burk, 31:3, 2000, 178-181
Sum of Infinite Series (Mathematics Without Words), Rick Mabry, 32:1, 2001, 19, C
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A series for \( \ln k \), James Lesko, 32:2, 2001, 119-122, C
What’s Harmonic About the Harmonic Series?, David Kullman, 32:3, 2001, 201-203, C
Convergence-Divergence of \( p \)-Series, Rasul Khan, 32:3, 2001, 206-208, C
Arctangent Sums, Louis Bragg, 32:4, 2001, 255-257, 5.3.1
Geometric Progressions – A Geometric Approach, Michael Strizhevsky and Dmitry Kreslavskiy, 32:5, 2001, 359-362, 0.6
Sum Rearrangements, Russell A. Gordon, 32:5, 2001, 377-380, C
\( \ln 2 \) (Mathematics Without Words), Norman Schaumberger, 33:1, 2002, 23, C, 5.3.2
FFF #182. New exponent laws, Carl Libis, 33:1, 2002, 38, F
A Tale of Two Series, Thomas J. Osler and Marcus Wright, 33:2, 2002, 99-106, 7.2
Designing a Calculus Mobile, Tom Farmer, 33:2, 2002, 131-136, 5.2.4
An Application of Condensation, Sidney Kung, 33:2, 2002, 168, C
Investigating Possible Boundaries Between Convergence and Divergence, Frederick Hartmann and David Sprows, 33:5, 2002, 405-406, C, 9.5
FFF #200. A lopsided interval of convergence, Ed Barbeau, 34:1, 2003, 50, F
FFF #206. A series that converges and diverges, Doug Kuhlman, 34:2, 2003, 135, F
Column Integration and Series Representations, Thomas P. Dence and Joseph B. Dence, 34:2, 2003, 144-148, C, 5.2.5
Calculus, Pi, and the Machine Age, Susan Jane Colley, 34:4, 2003, 264-269, 5.2.4, 9.6
Proof Without Words: Bounding the Euler-Mascheroni Constant, Meiyue Shao, 46:5, 2015, 347, C, 5.2.2, 5.2.6
Explicit Form of the Faulhaber Polynomials, Jose Luis Cereceda, 46:5, 2015, 359-363, 3.2
Yet More Ways to Skin a Definite Integral, Brian Bradie, 47:1, 2016, 11-18, 5.2.4, 5.3.4
De Morgan’s Series Test, C. W. Groetsch, 47:2, 2016, 136-137, C
Proof Without Words: A Sum Computed by Self-Similarity, Yukio Kobayashi, 49:1, 2018, 10, C, 3.1, 3.2
Proof Without Words: Rearranged Alternating Harmonic Series, Yajun An and Tom Edgar, 49:1, 2018, 35, C
Why the Centroid is the Centroid: Modern Variations on a Theme of Archimedes, William C. Mercier, 49:2, 2018, 93-102, 0.3, 9.7
Euler’s Sine Product Formula: An Elementary Proof, David Salwinski, 49:2, 2018, 126-135, 5.2.5, 5.3.3, 9.5
Proof Without Words: An Alternating Geometric Series, Angel Plaza, 49:3, 2018, 200, C
Proof Without Words: Riemann Meets Euler-Mascheroni, Gerald E. Bilodeau, 49:5, 2018, 341, C, 9.5
Riemann Sums for Generalized Integrals, Jean-Paul Truc, 50:2, 2019, 123-132, 5.2.1, 5.2.9, 5.2.10, 8.4
Geek Tragedy (Poem), Kenneth Mulder, 50:2, 2019, 133, C, 9.2
"Sum" Visual Rearrangements of the Alternating Harmonic Series, Yajun An and Tom Edgar, 49:4, 2019, 280-285, 5.2.1, 5.3.2
Coloring a 1-by-n Chessboard, Elias Abboud, Rathi Saleh, and Amal-Sharif Rassian, 49:5, 2019, 322-330, 3.2, 9.2
A Morsel from Euler, William Dunham, 51:1, 2020, 3-8, 0.6
Randomly Generated Identities, David Treeby, 51:2, 2020, 90-94, 3.2, 7.2
Euler’s Limit and Stirling’s Estimate, Adam Hammert, 51:5, 2020, 330-336, 5.1.1, 5.3.2, 9.5
Geometric Series in an Equilateral Triangle – Three Proofs Without Words, 51:5, 2020, Stephan Berenkonk, 385, C, 0.4
Atypical Series Representations of Riemann-Integrable Functions, Andrzej Piotrowski, 52:1, 2021, 31-38, 5.2.9, 9.5, 9.6
Proofs Without Words: A Visual Proof for an Infinite Alternating Sign Series, Ivica Martinjak & Ana Mimica, 52:3, 2021, 204, C
An Elementary Derivation of the Duration of Play in the Gambler’s Ruin Problem, Greg Orosi, Ricardo Alfaro, Lixing Han & Kenneth Schilling, 52:4, 2021, 299-301, C, 7.1, 7.2
Tetration: Iterative Enjoyment, Abe Edwards & Brielle Komosinski, 53:3, 2022, 209-219, 0.2, 5.3.2, 9.5

5.4.3 Taylor polynomials and power series

Extending the Series for ln 2, Norman Schaumberger, 18:3, 1987, 223-225, C
Spreadsheets, Power Series, Generating Functions, and Integers, Donald R. Snow, 20:2, 1989, 143-152, 6.3
5.5 Vector algebra and geometry (including 2x2 and 3x3 determinants)

A Note on the Vector Triple Product, Thomas A. McCullough, 11:3, 1980, 206-207, C
From an Inequality to Inversion, Man-Keung Siu, 12:2, 1981, 149-151, C, 0.4
Generalized Pythagorean Triples, W. J. Hildebrand, 16:1, 1985, 48-52, 0.6, 9.3
Tetrahedra, Skew Lines and Volume, James Smith and Mason Henderson, 16:2, 1985, 138-140, C
Three Ways to Maximize the Area of an Inscribed Quadrilateral, Leroy F. Meyers, 17:3, 1986, 238-239, C, 0.3
Distance from a Point to a Plane with a Variation on the Pythagorean Theorem, Abdus Sattar Gazdar, 23:5, 1992, 410-412, C
Kepler Orbits More Geometrico, Andrew Lenard, 25:2, 1994, 90-98, 0.3
On the Distance from a Point to a Curve, Mark Schwartz, 25:4, 1994, 317-319, C
Formulas of Linear Geometry, Heinrich W. Guggenheimer, 27:1, 1996, 24-32
FFF #145. The Height of a Trapezoid, Dale R. Buske, 30:3, 1999, 210, F
Related Rates Collide with Vectors, Stephen Fulling, 31:2, 2000, 116-119, 5.1.3
N-Site Insights, Bret Draayer, 31:4, 2000, 250-258, 4.1
How Long Was Your Day?, Albert Schueller, 35:1, 2004, 31-33
FFF #272. Rotating a vector, Elliot Cohen, 39:1, 2008, 49, F
The Pearson and Cauchy-Schwarz Inequalities, David Rose, 39:1, 2008, 64, C, 7.3, 9.5
FFF #277. The all-inclusive span, Ayoub B. Ayoub, 39:2, 2008, 136, F
The Cross Product as a Polar Decomposition, Gotz Trenkler, 39:3, 2008, 237-239, C, 4.1, 4.3
Teaching Tip: A Vector Proof of the Addition Law for Cosines, Zhibo Chen, 41:5, 2010, 415, C, 0.6
Lattice Cubes, Richard Parris, 42:2, 2011, 118-125
An n-dimensional Pythagorean Theorem, William J. Cook, 44:2, 2013, 0.4, 4.2
A Simple Proof of the Right-Hand Rule, Fuchang Gao, 44:3, 2013, 227-229, C
On the Inverse Curvature Problem, Adam Glesser, James Shade, and Bogdan D. Suceava, 46:3, 2015, 207-214, 5.2.9, 5.6.1, 6.4, 9.8
An Even Simpler Proof of the Right-Hand Rule, Eric Thurschwell, 46:3, 2015, 215-217, C, 0.6
Finding Polygonal Areas with the Corset Theorem, Stuart M. Anderson and Owen D. Byer, 48:3, 2017, 171-178, 0.4
The Rational Approximation of Small Angles, Harvey Diamond, 49:1, 2018, 57-59, C, 0.4, 5.1.5, 5.7.3
Fitting a Cubic Bezier to a Parametric Function, Alvin Penner, 50:3, 2019, 185-196, 5.6.1, 5.7.3, 5.8, 8.3, 9.6
Orientation of the Cross Product of 3-vectors, Suk-Geun Hwang, 49:4, 2019, 298-299, C, 4.3
Why Hamilton Couldn’t Multiply Triples, Adrian Rice & Ezra Brown, 52:3, 2021, 185-192, 4.3, 4.4, 9.4
Unlawful Calculations: A Look Into Lie’s Notebook, Johnner Barrett, 53:2, 2022, 104-115, 5.7.3, 6.1, 6.2, 6.6
5.6 Curves and surfaces

5.6.1 Parametric and polar curves

Calculus by Mistake, Louise S. Grinstein, 5:4, 1974, 49-53, C, 5.1.2, 5.1.4, 5.2.2, 5.2.3, 5.2.5, 5.2.10, 5.4.2, 5.7.2
Rectangular Aids for Polar Graphs, Alice W. Essary, 13:3, 1982, 200-205, 5.2.8
On Hypocycloids and their Diameters, I. J. Schoenberg, 16:4, 1985, 262-267, 9.5
Vectors in a LOGO Learning Environment, Will Watkins, 16:4, 1985, 286-300
Defining Areas in Polar Coordinates, Frances W. Lewis, 17:5, 1986, 414-416, C
Transitions, Jeanne L. Agnew and James R. Choike, 18:2, 1987, 124-133, 0.7, 5.1.3, 9.10
Connecting the Dots Parametrically: An Alternative to Cubic Splines, Wilbur J. Hildebrand, 21:3, 1990, 208-215, 4.6, 9.6
Moments on a Rose Petal, Douglass L. Grant, 21:3, 1990, 225-227, C, 5.2.5
Single Equations Can Draw Pictures, Keith M. Kendig, 22:2, 1991, 134-139, C, 0.4, 0.5, 5.1.5, 5.6.2
Trochoids, Roses, and Thorns—Beyond the Spirograph, Leon M. Hall, 23:1, 1992, 20-35
Rotation of Axes—Not Just for Conics, Steven Schonefeld, 23:5, 1992, 418-425, 0.5
Does a Parabola Have an Asymptote?, David Bange and Linda Host, 24:4, 1993, 331-342, 5.1.1, 5.1.5
Heart to Bell (illustration), Michael W. Chamberlain, 25:1, 1994, 34
Isaac Newton: Credit Where Credit Won't Do, Robert Weinstock, 25:3, 1994, 179-192, 0.5, 2.2, 5.1.3, 5.4.3
In Defense of Newton: A Physicist's View, A. P. French, 25:3, 1994, 206-209, 0.5, 2.2
FFF #81. Throwing Another Fallacy out the Window (Using Minimum Energy), Paul Deiermann and Rick Mabry, 25:4, 1994, 434, F (also 26:5, 1995, 383)
The Chair, the Area Rug, and the Astroid, Mark Schwartz, 26:3, 1995, 229-231, C, 5.1.4
FFF #91. A Perpetual Motion Matchine, Eric Chandler, 26:4, 1995, 302-303, F
Rectangular-to-Polar Folding Fans, Dan Pritikin, 26:4, 1995, 305-308, C
FFF #99. Polar Increment of Area, Peter Jarvis and Paul Schuette, 27:2, 1996, 117, F, 5.2.6
Some Comments on "Parametric Equations and Plane Curves", Zhibo Chen, 27:3, 1996, 210-211, C
A Note on the Brachistochrone Problem, Jim Zeng, 27:3, 1996, 206-208, C
A Rose is a Rose is a Rose ..., Melissa Shepard, 28:1, 1997, 55-56, C
An Envelope for a Spirograph, Andrew Simons, 28:2, 1997, 134-139
Visualizing the Geometry of Lissajous Knots, John Meier and Jessica Wolfson, 28:3, 1997, 211-216, 9.8
The Coffee Cup Caustic for Calculus Students, Brian J. Loe and Nathaniel Beagley, 28:4, 1997
Designing a Baseball Cover, Richard B. Thompson, 29:1, 1998, 48-61
Numerically Parametrizing Curves, Steven Wilkinson, 29:2, 1998, 104-119, 5.6.2, 9.8
Pursuit and Regular N-gons, Michael J. Seery, 29:3, 1998, 228-229, C
MATH and Other Four-Letter Words, Marc D. Sanders and Barry A. Tesman, 29:5, 1998, 418-419, C
Spirals and Conchospirals in the Flight of Insects, Khristo N. Boyadzhiev, 30:1, 1999, 23-31, 9.10
Shortest Path Solution by Epitrochoid Machine, Mark Schwartz and Darryl Adams, 30:3, 1999, 221-225
Normal Lines and the Evolute Curve, David Sanchez and Kirby C. Smith, 31:5, 2000, 397-403, C, 5.1.3
The Sun, The Moon, and Convexity, Noah Samuel Brannen, 31:6, 2000, 268-272, 5.7.3
Why the Moon’s Orbit is Convex, Laurent Hodges, 33:2, 2002, 169-170, C, 5.7.3
Can a Bicycle Create a Unicycle Track?, David L. Finn, 33:4, 2002, 283-292, 9.10
Lissajous Figures and Chebyshev Polynomials, Julio Castineira Merino, 34:2, 2003, 122-127, 9.8
The Brachistochrone Problem, Nils P. Johnson, 35:3, 2004, 192-197
Snapshots of a Rotating Water Stream, Steven L. Siegel, 36:2, 2005, 152-154, C, 9.10
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Folding Beauties, Leah Wrenn Berman, 37:3, 2006, 176-186, 0.5, 9.7
The Maximal Deflection on an Ellipse, Dan Kalman, 37:4, 2006, 250-260, 5.7.1
Playing Ball in a Space Station, Andrew Simoson, 37:5, 2006, 334-343, 9.10
Mechanical Circle-Squaring, Barry Cox and Stan Wagon, 40:4, 2009, 238-247, 0.4, 9.7, 9.10
The Helen of Geometry, John Martin, 41:1, 2010, 17-28, 0.3, 2.2
The Dance of the Foci, David Seppala-Holtzman, 41:2, 2010, 122-128, 0.5
Finding Rational Parametric Curves of Relative Degree One or Two, Dave Boyles, 41:5, 2010, 371-382, 9.3, 9.4
Newton’s Radii, Maupertuis’ Arc Length, and Voltaire’s Giant, Andrew J. Simoson, 42:3, 2011, 183-190, 5.2.8, 9.10
Generalized Parabolas, Dan Joseph, Gregory Hartman, and Caleb Gibson, 42:4, 2011, 275-282, 0.3, 0.5, 5.7.3, 9.8
(see also 43:5, 429)
From the Dance of the Foci to a Strophoid, Andrew Jobbings, 42:4, 2011, 289-298, 0.5
Do Dogs Know the Trammel of Archimedes?, Mark Schwartz, 42:4, 2011, 299-308, 0.3, 0.5, 5.1.4, 9.10
The Catenary as Roulette, Javier Sanchez-Reyes, 43:3, 2012, 216-219, 0.5, 5.7.3
Parametric Equations at the Circus: Trochoids and Poi Flowers, Eleanor Farrington, 46:3, 2015, 173-177, 9.8
Rational and Implicit Equations for Some Polar Curves, Dave Boyles, 46:3, 2015, 189-196, 0.3, 5.4.3, 9.7, 9.8
To Be (a Circle) or Not to Be?, Hassan Boualem and Robert Brouzet, 46:3, 2015, 197-206, 0.2, 0.5, 5.2.8, 9.8
On the Inverse Curvature Problem, Adam Glesser, James Shade, and Bogdan D. Suceava, 46:3, 2015, 207-214, 5.2.9, 5.5, 6.4, 9.8
Journal Problems Sections: Modern Challenges and Teaching Tools, Brian D. Beasley and David R. Stone, 46:5, 2015, 336-346, 0.7, 3.2, 5.2.9, 6.1, 9.3
Conics as Envelopes of Families of Plane Curves, Juan Carlos Ponce Campuzano, 50:2, 2019, 115-122, 0.4, 0.5, 9.7
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Fitting a Cubic Bezier to a Parametric Function, Alvin Penner, 50:3, 2019, 185-196, 5.5, 5.7.3, 5.8, 8.3, 9.6
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5.7.1 Multivariable differential calculus

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The Flowering of String Rewriting Systems, Anne M. Burns, 23:3, 1992, 225-235, 8.3

8.3 Computer graphics

Enhancing the Value of Graphics Programs, Clifford H. Wagner, 18:2, 1987, 142-152, 8.1
Drawing a Circle, Harley Flanders, 19:1, 1988, 72-78
Parametric Surfaces, Harley Flanders, 19:5, 1988, 444-447, 5.6.1
The Curious Fate of an Applied Problem, Alan H. Schoenfeld, 20:2, 1989, 115-123, 5.1.5, 9.5
Calculus and Computer Vision, Mark Bridger, 23:2, 1992, 132-141, 5.7.1
The Flowering of String Rewriting Systems, Anne M. Burns, 23:3, 1992, 225-236, 8.2

Complex Vectors and Image Identification, Lyndell Kerley and Jeff Knisley, 24:2, 1993, 166-174, 9.6
A Computer Lab for Multivariate Calculus, Casper R. Curjel, 24:2, 1993, 175-177, C, 1.2, 5.7.1
Making Mountains from a Sum of Molehills, Anne M. Burns, 26:1, 1995, 51-57
Modeling Trees with a Stochastic Matrix, Anne M. Burns, 29:3, 1998, 230-236, 3.1
Breaking the Holiday Inn Priority Club CAPTCHA, Edward Aboufadel, Julia Olsen, and Jesse Windle, 36:2, 2005, 101-108, 4.7, 9.10

The Barycenter Theorem: Averaging Possible-Paths to Produce Optimal Discrete Straight-line Segments, Robert M. French and Patrick Gehant, 50:2, 2019, 103-114, 3.2, 9.7
8.4 Other topics in computer science

Of Memories, Neurons, and Rank-One Corrections, Kevin G. Kirby, 28:1, 1997, 2-19, 4.6
Riemann Sums for Generalized Integrals, Jean-Paul Truc, 50:2, 2019, 123-132, 5.2.1, 5.2.9, 5.2.10, 5.4.2
Idempotent Factorizations in the Cryptography Classroom, Barry S. Fagin, 51:3, 2020, 195-203, 9.3

9 Other Topics

9.1 Set theory and logic (also see 0.9)

If...Some Suggestions on Presenting the Connector "if...then", Aaron Seligman, 1:2, 1970, 22-26, 0.9
Factoring Functions, J. C. Bodenrader, 2:1, 1971, 23-26, 0.6, 5.1.2, 3.2
Some Applications of the Law of the Contraapositive, Morton J. Hellman, 4:3, 1973, 86-88, C, 0.9
The Equivalence of the Well-Ordering Principle and Dirichlet's Box Principle, Aron Pinker, 5:1, 1974, 76-77, C
Godel's Theorem (Part I), Richard Wiebe, 6:2, 1975, 13-17
Godel's Theorem (Part II), Richard Wiebe, 6:3, 1975, 4-7
Mathematics—Is It Any of Your Business?, Ralph Mansfield, 6:3, 1975, 20-26, 3.1, 1.2
Solving Whodunits by Symbolic Logic, Lawrence Sher, 6:4, 1975, 36-38
On the Definition of Implication: Classroom Discussion and Justification, Ray F. Snipes, 8:4, 1977, 247-252, C
Types of Relations, Kenneth Slonneger, 8:5, 1977, 267-269
Boolean Algebra as a Proof Paradigm, Lawrence Sher, 9:3, 1978, 186-190
Analogies and Metaphors to Explain Godel's Theorem, Douglas R. Hofstadter, 13:2, 1982, 98-114
A Machine as Smart as God, Rudy Rucker, 13:2, 1982, 115-121, 2.2
The Asylum of Doctor Tarr and Professor Fether, Raymond Smullyan, 13:2, 1982, 142-146
Probabilistic Dependence Between Events, Ruma Falk and Maya Bar-Hillel, 14:3, 1983, 240-247, 7.2
Is the Venn Diagram Good Enough?, Mou-Liang Kung and George C. Harrison, 15:1, 1984, 48-50, 0.2
The Construction of Venn Diagrams, Branko Grunbaum, 15:3, 1984, 238-247
An Odd Induction Proof, Karl David, 15:3, 1984, 251, C
How to Live to be 100, Robert Geist, 15:4, 1984, 256-263
On Venn Diagrams and the Counting of Regions, Branko Grunbaum, 15:5, 1984, 433-435, C
Satan, Cantor, and Infinity, Raymond M. Smullyan, 16:2, 1985, 118-121

The Game of Sprouts, Gordon D. Prichett, 7:4, 1976, 21-25, 3.1
Connect-It Games, Frank Harry and Robert W. Robinson, 15:5, 1984, 411-419, 3.1
Pascal's Triangle, Karl J. Smith, 4:1, 1973, 1-13, 0.6, 3.2
Fibonacci Numbers and Pineapple Phyllotaxy, Judithlynne Carson, 9:3, 1978, 132-136, 5.4.1
Computer-Generated Knight Tours, Michael Gilpin, 13:4, 1982, 252-259, 3.1, 3.3
Isomorphisms on Magic Squares, Ali R. Amir-Moez, 14:1, 1983, 48-51, 0.2, 9.3, 9.4
Paths and Pascal Numbers, John F. Lucas, 14:4, 1983, 329-341, 3.2
A Tiling of the Plane with Triangles, Paul T. Mielke, 14:5, 1983, 377-381, 0.3, 9.3
Pascal's Triangle, Difference Tables and Arithmetic Sequences of Order N, Calvin Long, 15:4, 1984, 290-298, 3.2, 5.4.1, 6.3
The Pascal Polytope: An Extension of Pascal's Triangle to N Dimensions, John F. Putz, 17:2, 1986, 144-155, 3.2, 5.4.1, 6.3
Pascal Triangles and Combinations Where Repetitions Are Allowed, Kendell Hyde, 19:1, 1988, 60-62, C, 3.2
Musical Notes, Angela B. Shiflet, 19:4, 1988, 345-347, C, 7.2, 3.2
Permutation Puzzles: Student Research Project, John H. Wilson, 24:2, 1993, 163-165, 3.2
FFF. A Centennial Tribute to Sam Loyd, Dean Clark, 23:5, 1992, 402-404, F
Digits in Triangular Squares, Dipendra Sengupta, 30:1, 1999, 31, C
Modeling Mathematics With Playing Cards, Martin Gardner, 31:3, 2000, 173-177
On Lunda-Designs and the Construction of Associated Magic Squares of Order 4p, Paulus Gerdes, 31:3, 2000, 182-188, 0.3
Numerology Marches On, David Singmaster, Lawrence Braden, Peter Y. Woo and Brian Stewart Watts, 31:3, 2000, 236-237, C
Some New Results on Magic Hexagrams, Martin Gardner, 31:4, 2000, 274-280, 3.2
Analyzing Games of Information, Randall McCutcheon, 32:2, 2001, 82-90
The Lord Over Better and Worse Births, John Fossa and Glenn Erickson, 32:3, 2001, 185-193, 9.3
Miscellanea: Clock Arithmetic, Carlton A. Lane, 32:4, 2001, 317, C
A Visit With Six, Monte J. Zerger, 33:2, 2002, 74-87, 9.3
A Poem: A Meeting with Sunya, V. V. Dixit, 33:2, 2002, 166-167, C
The “Origin” of Geometry, Reuben Hersh, 33:3, 2002, 207-211, 0.3, 2.1
Alice in Numberland: An Informal Dramatic Presentation in 8 fits, Robin Wilson, 33:5, 2002, 354-377
Lewis Carroll’s Amazing Number-Guessing Game, Richard F. McCoart, 33:5, 2002, 378-383, 0.2
A 51-star U. S. Flag, Gary Kennedy, 34:2, 2003, 170-171, C
FFF #233. Measuring humour, Timandra Harkness and Helen Pilcher, 36:1, 2005, 50-51, F
How to Ensure That Level Heads Prevail, Shmuel Zamir and Ruma Falk, 36:5, 2005, 396, 418, C
Graeco-Latin Squares and a Mistaken Conjecture of Euler, Dominic Klyve and Lee Stemkoski, 37:1, 2006, 2-15, 3.2, 9.4
A Card Trick and the Mathematics Behind It, Gabriela R. Sanchis, 37:2, 2006, 103-109, 9.5
The Non-Attacking Queens Game, Hassan Noon and Glen Van Brummelen, 37:3, 2006, 223-227, C
We Didn’t Start Mathematics (song lyrics), Brian Beasley, 38:3, 2007, 204, 209, C
The Number-Pad Game, Alex Fink and Richard Guy, 38:4, 2007, 260-264
Hermit Points on a Box, Richard Hess, Charles Grinstead, Marshall Grinstead, and Deborah Bergstrand, 39:1, 2008, 12-23, 0.4, 5.7.1
Number Place – The First Sudoku, Ed Pegg, Jr., 39:1, 2008, 33, C
Finding All Solutions to the Magic Hexagram, Alexander Karabegov and Jason Holland, 39:2, 2008, 102-106, 3.2
They Say Mathematics is Beautiful (poem), Kung-Ming Tiong, 39:2, 2008, 128, C
Tuning with Triangles, Leon Harkleroad, 39:5, 2008, 367-373, 2.2
Sam Loyd’s Courier Problem with Diophantus, Pythagoras, and Martin Gardner, Owen O’Shea, 39:5, 2008, 387-391, C, 0.2, 0.7
Two Applications of a Hamming Code, Andy Liu, 40:1, 2009, 2-5, 9.1, 9.3
Solomon’s Sea and Pi, Andrew J. Simoson, 40:1, 2009, 22-32, 0.4, 2.1
Winning at Rock-Paper-Scissors, Derek Eyler, Zachary Shalla, Andrew Doumaux, and Tim McDevitt, 40:2, 2009, 125-128, C, 7.1, 7.2
L-Tromino Tilings of Mutated Chessboards, Martin Gardner, 40:3, 2009, 162-168, 9.7
Set of Mutually Orthogonal Sudoku Latin Squares, Ryan M. Pedersen and Timothy L. Vis, 40:3, 2009, 174-180, 9.4
Jeeps Penetrating a Hostile Desert, Herb Bailey, 40:3, 2009, 182-188, 9.9, 9.10
Three Poems, Caleb Emmons, 40:3, 2009, 188, 0.1
Flipping Triangles!, Marc Zucker, 40:3, 2009, 189-193, 3.1
n-Card Tricks, Hang Chen and Curtis Cooper 40:3, 2009, 196-201, 3.2
Reflections on the N + k Queens Problem, R. Douglas Chatham, 40:3, 2009, 204-210, 3.2, 4.1
Crossword Puzzle: \( \pi_1 \cong \mathbb{Z} \oplus \mathbb{Z} \), Gary Kennedy, 40:3, 2009, 212
We shall find the Cube of the Rainbow (poem), Emily Dickinson, 40:5, 2009, 336, C
MoonPi, Bathsheba Grossman, 40:5, 2009, 344, C
To Divine Proportion (poem), Rafael Alberti, 40:5, 2009, 375, C
Brown Sharpie: Advanced Frisbee Calculus, Courtney ??, 41:1, 2010, 16, C
Grobner Basis Representations of Sudoku, Elizabeth Arnold, Stephen Lucas, and Laura Taalman, 41:2, 2010, 101-111, 9.4
Sonnet (poem), Susan Colley, 41:2, 2010, 144, C
Three Poems, Nicole Younger Halpern, 41:3, 2010, 233-234, C
How Bound Tetrahedron Wraps a Real Tetrahedron, Roger Berry, 41:5, 2010, 356, C, 0.3
Poem: A Little Love Story, Bonnie Shulman, 41:5, 2010, C
How Iterated Mobius was constructed, Anne Burns, 42:1, 2011, 14, C
Mathematical Jeopardy?, Andy Liu, 42:1, 2011, 24, C
Boundary Conditions (poem), Ursula Whitcher, 42:1, 2011, 56, C
Mathematics at the Movies, Martin J. Erickson, 42:3, 2011, 228, C
Folding Polyominoes from One Level to Two, Greg N. Frederickson, 42:4, 2011, 265-274, 0.3, 9.7
The Easiest Lights Out Games, Bruce Torrence, 42:5, 2011, 361-371, 4.1, 4.3
Student Research Project: One-dimensional Czedli-type Islands, Eszter K. Horvath, Attila Mader, and Andreja Tepavcevic, 42:5, 2011, 374-378, C, 0.9, 3.2, 9.3
Hexaflexagons, Martin Gardner, 43:1, 2012, 2-5, 0.3, 3.2, 9.4, 9.8
Story Puzzles, Oscar Levin, 45:4, 2014, 296, C, 9.1
Knights, Knaves, Normals, and Neutrals, Jason Rosenhouse, 45:4, 2014, 297-306, 9.1
A Prehistory of Nim, Lisa Rougetet, 45:5, 2014, 358-363, 2.2, 3.2
Sequences of Power Lines, Ricardo Alfaro, 46:2, 2015, 113-120, 0.2, 0.7, 3.2, 5.1.1, 5.4.1, 9.3
Proof Without Words: Each But Two Triangular Numbers Is a Sum of Three Triangular Numbers, Roger B. Nelsen, 46:3, 2015, 172, C, 3.2, 9.3
MAA 100th Anniversary CMJ Puzzle A, David Nacin, 46:4, 2015, 254, C
Candy Crush Combinatorics, Dana Rowland, 46:4, 2015, 255-262, 3.2
MAA 100th Anniversary CMJ Puzzle C, David Nacin, 46:4, 2015, 263, C
Square-Sum Pair Partitions, Gordon Hamilton, Kiran S. Kedlaya, and Henri Picciotto, 46:4, 2015, 264-269, 0.1, 9.3
The Uniqueness of Rock-Paper-Scissors-Lizard-Spock, Brian J. Birgen, 46:4, 2015, 270-273, 3.2
MAA 100th Anniversary CMJ Puzzle J, David Nacin, 46:4, 2015, 274, C
MAA 100th Anniversary CMJ Puzzle M, David Nacin, 46:4, 2015, 294, C
A Magic Trick Leads to an Identity: Some Induction Fun, Robert W. Vallin, 46:4, 2015, 295-298, C, 0.9, 3.2
Proof Without Words: Centered Triangular Numbers, Roger B. Nelsen, 46:5, 2015, 335, C, 0.2, 3.2, 9.3
Abbott-and-Costello Numbers, Howard Sporn, 47:2, 2016, 126-132, 4.1, 9.3
Phillip Larkin’s Koan, Paisley Rekdal, 47:2, 2016, 133, C
Proof Without Words: Matchstick Triangles, Tom Edgar, 47:3, 2016, 207, C, 9.3
Babbage and Carroll in the Silent Workshop, 1867, Neil Aitken, 47:3, 2016, 215, C
Rankings Over Time, Michael A. Jones, Alexander Webb, and Jennifer Wilson, 47:4, 2016, 242-248, 5.4.2, 9.8
MAA 101st Anniversary CMJ Puzzle A, David Nacin, 47:4, 2016, 249, C
Statistics on the Bonus Round of Wheel of Fortune, Kathleen Ryan and Brittany Shelton, 47:4, 2016, 250-253, 7.3
MAA 101st Anniversary CMJ Puzzle C, David Nacin, 47:4, 2016, 254, C
MAA 101st Anniversary CMJ Puzzle J, David Nacin, 47:4, 2016, 264, C
Algebra From Geometry in the Card Game SET, Timothy E. Goldberg, 47:4, 2016, 265-273, 9.4, 9.7
MAA 101st Anniversary CMJ Puzzle M, David Nacin, 47:4, 2016, 274, C
Horse Racing Odds: Can You Beat the Track by Hedging Your Bets?, Joel Pasternack and Stewart Venit, 47:4, 2016, 275-280, 4.1, 7.2
The FA Cup Draw and Pairing Up Probabilities, Patrick Sullivan, 47:4, 2016, 282-292, 3.2, 7.2
MAA 101st Anniversary CMJ Puzzles Solutions, David Nacin, 47:4, 2016, 293, C
Form (poem), Sarah Blake, 47:5, 2016, 333, C, 9.8
Do the Twist! (on Polygon-Base Boxes), sarah-marie belcastro and Tamara Veenstra, 47:5, 2016, 340-345, 0.3, 0.6
The Bizarre World of Nontransitive Dice: Games for Two or More Players, James Grime, 48:1, 2017, 2-9, 7.1, 7.2
Balanced Nontransitive Dice, Alex Schaefer and Jay Schweig, 48:1, 2017, 10-16, 3.3, 7.1, 7.2
A Plane Angle Poem, Jordie Albiston, 48:1, 2017, 30, C
Forgotten Equations (poem), Kazim Ali, 48:2, 2017, 111, C
Distances Between Factorizations of the Chicken McNugget Monoid, Scott Chapman, Pedro Garcia-Sanchez & Christopher O’Neill, 52:3, 2021, 158-176, 3.1, 3.2, 9.4
Puzzles of Cardinality, Oscar Levin & Tyler Markkanen, 52:4, 2021, 243-25, 9.1
Parking Functions: Choose Your Own Adventure, Joshua Carlson, Alex Christensen, Pamela E. Harris, Zakiya Jones & Andrés Ramos Rodriguez, 52:4, 2021, 254-26, 3.2, 7.2
Magic Card Tricks on Hamming Codes over Finite Fields, Hideo Nagahashi, 52:4, 2021, 281-288, 4.1, 9.4
Exploring and Extending the Impossible Card Location Trick, Samantha Pezzimenti, Geovanni DiCicco, Aditya Kommoju, and Dhanush Rajesh, 52:5, 2021, 356-363, 9.3
Arranging Beetles, Robert Gallant & Georg Gunther, 53:1, 2022, 3-12, 3.1, 3.2
Report on the 12th Annual USA Junior Mathematical Olympiad, Bela Bajnok & Evan Chen, 53:1, 2022, 13-20, 0.3, 3.2, 5.4.1, 9.1, 9.3, 9.5

9.3 Number theory (also see 0.1)

The Irrationality of Certain Numbers, Peter A. Lindstrom, 1:1, 1970, 30-31, 0.2
F(1) Rejection Theorem, Howard Sarr, 1:2, 1970, 39-40
F(1) and F(d) Rejection Theorems, William I. Miller, 2:2, 1971, 95-96
Pythagorean Triples by Geometry, Steven L. Kleiman, 3:1, 1972, 39-41
Anomalous Cancellation, R. P. Boas, Jr., 3:2, 1972, 21-24
ab=c, Sidney Penner, 4:2, 1973, 86-87, C
Fermat Numbers, W. G. Leavitt, 4:3, 1973, 7-10
Random Sieving and the Prime Number Theorem, Karl Greger, 5:1, 1974, 41-46, 5.3.2
The Computer as an Aid to Discovery, Frederick H. Young, 5:3, 1974, 55-57
On Generalized h-Base, Norman Woo, 6:3, 1975, 16-17
Quasi-Pythagorean Triples for an Oblique Triangle, Kay Dundas, 8:3, 1977, 152-155, 0.6
Methods of Random Number Generation, Edwin G. Landauer, 8:5, 1977, 296-303
A Note on Angle Construction, Richard L. Francis, 9:2, 1978, 73-75
The Pigeonhole Principle, Kenneth R. Rebman, 10:1, 1979, 3-13, 3.1
Triangular Squares, Bill Leonard and Harris S. Schultz, 10:3, 1979, 169-171
Two Distinguished Integers, Ross Honsberger, 10:3, 1979, 195-197
Billiard Balls and a Number Theory Result, Charles H. Jepsen, 10:5, 1979, 306-312
The Use of Generating Functions to Discover and Prove Partition Identities, Henry L. Alder, 10:5, 1979, 318-329
On Sets of Points in the Plane and A Property of the Binomial Coefficients, Ross Honsberger, 11:2, 1980, 116-119, 0.3
Another Derivation of a Double Inequality, Norman Schaumberger, 11:4, 1980, 273, C
An Elementary Gem Concerning pi(n), the Number of Primes less than or equal to n, Ross Honsberger, 11:5, 1980, 305-312
Factoring Factorials, Richard J. Friedlander, 12:1, 1981, 12-20
Short Stories in Number Theory, Ross Honsberger, 12:1, 1981, 34-40
Some Conjectures on Fermat's Last Conjecture, Lawrence Sher and David Sher, 12:1, 1981, 51-52, C
Applying Complex Arithmetic, Herbert L. Holden, 12:3, 1981, 190-194, 0.6, 5.3.1, 9.5
Forward and Backward with Euclid, Gary E. Stevens, 12:5, 1981, 302-306
Sievings Primes on a Micro, Harley Flanders and Alan F. Tomala, 19:4, 1988, 364-367, 8.1
Amalgamation fo Formulae for Sequences, N. S. Mendelsohn, 19:5, 1988, 421-424, C
Finding Rational Roots of Polynomials, Don Redmond, 20:2, 1989, 139-141, C, 0.7
Strings of Strongly Composite Integers and Invisible Lattice Points, Peter Schumer, 21:1, 1990, 1990, 37-40, C
Computer-Aided or Analytic Proof?, Herve Lehning, 21:3, 1990, 228-239
Triangles with Integer Sides and Sharing Barrels, David Singmaster, 21:4, 1990, 278-285, 0.4
The Birth of the Eotvos Competition, Agnes Arvai Wieschenberg, 21:4, 1990, 286-293, 2.2
Polar Summation, Loretta McCarty, 21:5, 1990, 397-398, C
Secrets of the Faro: Student Research Project, Irl C. Bivens, 22:2, 1991, 144-147, 9.4
Summation by Parts, Gregory Fredricks and Roger B. Nelsen, 23:1, 1992, 39-44, C, 5.1.2, 5.4.1, 5.4.2
The Probability that (a, b)=1, Aaron D. Abrams and Matteo J. Paris, 23:1, 1992, 47, C
Number Theory and Linear Algebra: Exact Solutions of Integer Systems, George Mackiw, 23:1, 1992, 52-58, 4.1
A Serendipitous Application of the Pythagorean Triplets, Susan Forman, 23:4, 1992, 312-314, C, 0.2
Sums of Triangular Numbers, Roger B. Nelsen, 23:5, 1992, 417, C
Geometry: A Gateway to Understanding, Peter Hilton and Jean Pedersen, 24:4, 1993, 298-317, 0.3
Towers of Powers Modulo m, Robert J. MacG. Dawson, 25:1, 1994, 22-28
Eisenstein's Misunderstood Geometric Proof of the Quadratic Reciprocity Theorem, Reinhard C. Laubenbacher and David J. Pengelley, 25:1, 1994, 29-34
Frequencies of Digits in Factorials: An Experimental Approach, Michael L. Treuden, 25:1, 1994, 48-55
Euclid's (Gaussian) Algorithm: A Lattice Approach, Steve Benson, 25:2, 1994, 118-124
Approaches to the Formula for the nth Fibonacci Number, Russell Jay Hendel, 25:2, 1994, 139-142, C, 0.2, 4.5, 5.4.2, 9.5
Sums of Odd Squares, Roger B. Nelsen, 25:3, 1994, 246, C
The Repeating Integer Paradox, Paul Fjelstad, 26:1, 1995, 11-15
A Taylor-made Plug for Wiles' Proof, Nigel Boston, 26:2, 1995, 100-105
A Surprise Regarding the Equation phi(x) = 2(6n+1), Joseph B. Dence and Thomas P. Dence, 26:4, 1995, 297-301
The Square of Any Odd Number is the Difference Between Two Triangular Numbers (Proof Without Words), Roger B. Nelsen, 27:2, 1996, 118, C, 0.1
Fractions with Cycling Digit Patterns, Dan Kalman, 27:2, 1996, 109-115, 0.1
Generalizations of a Mathematical Olympiad Problem, Joe Klerlein and Scott Sportsman, 27:4, 1996, 296-297, 3.2
Digital Permutations, Bryan Dawson, 28:1, 1997, 26, C
A Long Sequence of Composite Numbers, Ed Pegg, Jr., 28:2, 1997, 121, C
Two Identities for Triangular Numbers (proof by picture), Roger B. Nelsen, 28:3, 1997, 197, C
On Dividing Coconuts: A Linear Diophantine Problem, Sahib Singh and Dip Bhattacharya, 28:3, 1997, 203-204, C, 5.4.3
Are There Functions That Generate Prime Numbers?, Paulo Ribenboim, 28:5, 1997, 352-359
The Brahmaagupta Triangles, Raymond A. Beauregard and E. R. Suryanarayan, 29:1, 1998, 13-17, 0.4
A Class of Pleasing Periodic Designs, Federico Fernandez, 29:1, 1998, 18-26, 4.3, 9.4
Egyptian Fractions and the Inheritance Problem, Premchand Anne, 29:4, 1998, 296-300
More Coconuts, Sidney H. Kung, 29:4, 1998, 312-313, C, 0.1
Square Roots From 1;24,51,10 to Dan Shanks, Ezra Brown, 30:2, 1999, 82-95
From Euler to Fermat, Hidefumi Katsuura, 30:2, 1999, 118-119, 9.5
Palindromic Primes, Harvey Dubner, 30:4, 1999, 292, C
Progress on the Tarry-Escott-Prouhet Problem, the editor, 31:1, 2000, 68, C
Recursions That Produce Pythagorean Triples, Peter W. Wade and William R. Wade, 31:2, 2000, 98-101
General Arithmetic Triangles and Bhaskara’s Equation, Raymond Beauregard and E. R. Suryanarayan, 31:2, 2000, 111-115
Three Fermat Trails to Elliptic Curves, Ezra Brown, 31:3, 2000, 162-172
Meta-Problems in Mathematics, Al Cuoco, 31:5, 2000, 373-378, 0.7, 5.1.2
A Polynomial with a Root Mod m for Every m, Allen J. Schwenk, 31:5, 2000, 403-405, C, 9.4
The Lord Over Better and Worse Births, John Fossa and Glenn Erickson, 32:3, 2001, 185-193, 9.2
Powers Made Easy, James Kirby, 32:5, 2001, 329, C, 0.1
Close!, Noam Elkies, 33:1, 2002, 16, C
A Visit With Six, Monte J. Zerger, 33:2, 2002, 74-87, 9.2
It’s Perfectly Rational, Philip K. Hotchkiss, 33:2, 2002, 113-117, 5.1.4
A Ramanujan Result Viewed From Matrix Algebra, Raymond A. Beauregard and E. R. Suryanarayan, 33:3, 2002, 212-214, 4.1, 9.4
Fermat’s Little Theorem From the Multinomial Theorem, Thomas J. Osler, 33:3, 2002, 239, C
A Numerical Introduction to Partial Fractions, Eric L. McDowell, 33:5, 2002, 400-403, C, 5.2.4
A Magic Trick from Fibonacci, James Smoak and Thomas J. Osler, 34:1, 2003, 58-60, C
Recursive Enumeration of Pythagorean Triples, Darryl McCullough and Elizabeth Wade, 34:2, 2003, 107-111
Rational Boxes, Sidney Kung, 34:3, 2003, 182, C, 5.1.4
Coin ToGa: A Coin-Tossing Game, Osvaldo Marrero and Paul C. Pasles, 34:3, 2003, 183-193, 7.2
Variations on a Theme from Pascal’s Triangle, Thomas J. Osler, 34:3, 2003, 216-223
Partitioning Triangular Numbers, Matthew Haines and Michael Jones, 34:4, 2003, 295, C
A large square consisting only of digits 7, 8 and 9, Hisanori Mishima, 34:4, 2003, 303, C, 0.1
On a Diophantine Equation and its Ramifications, Titu Andreescu and Dorin Andrica, 35:1, 2004, 15-21
Midy’s (Nearly) Secret Theorem – An Extension After 165 Years, Brian D. Ginsberg, 35:1, 2004, 26-30
Five Mathematicians, a Bunch of Coconuts, a Monkey, and a Coin, John E. Morrill, 35:4, 2004, 256-257
Discovering Roots: Ancient, Medieval, and Serendipitous, Bryan Dorner, 36:1, 2005, 35-43, 0.2, 2.1, 4.5
Irrational Roots of Integers, Ayshhyah Khazad and Allen J. Schwenk, 36:1, 2005, 56-57, C (see also 36:4, 317)
An Upper Bound on the n-th Prime, John H. Jaroma, 36:2, 2005, 158-159, C
M&m Sequences, Harris S. Shultz and Ray C. Shiflett, 36:3, 2005, 191-198, 6.3
On Sums of Cubes, Hajrudin Fejzic, Dan Rinne, and Bob Stein, 36:3, 2005, 226-228, C
Curious Consequences of a Miscopied Quadratic, Jeffrey L. Poet and Donald L. Vestal, Jr., 36:4, 2005, 273-277
Visibles Revisited, Mark Bridger and Andrei Zelevinsky, 36:4, 2005, 289-300
A Variant of the Partition Function, John F. Loase, David Lansing, Cassie Hryczaniuk, and Jamie Cahoon, 36:4, 2005, 320-321, C
Exactly When Is \((a+b)^n\) equivalent to \(a^n + b^n \pmod{n}\)?, Pratibha Ghatage and Brian Scott, 36:4, 2005, 322, C
A Paper-and-Pencil gcd Algorithm for Gaussian Integers, Sandor Szabo, 36:5, 2005, 374-380, 9.4
A Two-Parameter Trigonometry Series, Xiang-Qian Chang, 36:5, 2005, 408-412, C, 9.5
Using Random Tilings to Derive a Fibonacci Congruence, Keith Neu and Paul Deiermann, 37:1, 2006, 44-47, C
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A Mathematics Software Database, R. S. Cunningham and David A. Smith, 17:3, 1986, 255-266, 0.10, 3.4, 4.8, 5.8, 6.7, 7.4
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The Compleat Mathematics Software Database, R. S. Cunningham and David A. Smith, 19:3, 1988, 268-289, 0.10, 3.4, 4.8, 5.8, 6.7, 7.4
EXP, Version 3.02 for Windows, Jon Wilkin, 27:1, 1996, 68-73, 0.10
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The History of the Calculus, Carl Boyer, 1:1, 1970, 60-86, summarized by Carl Boyer
Intermediate Algebra, Joseph Newmyer and Gus Kletens, 5:1, 1974, 60-61, reviewed by Edward B. Wright
Elementary Linear Algebra, Paul C. Shields, 5:1, 1974, 61-62, reviewed by Frank Hacker
Elementary Functions with Coordinate Geometry, Earl Swokowski, 5:1, 1974, 62, reviewed by Harry L. Hancock
Programmed Mathematics for Nurses, George Sackheim and Lewis Robins, 5:1, 1974, 63-64, reviewed by Allen P. Angel
Business Mathematics—A Collegiate Approach, Nelda W. Rouche, 5:2, 1974, 55-56, reviewed by Lawrence Clar
Mathematical Ideas, 2nd ed., Charles D. Miller and Vern E. Heeren, 5:2, 1974, 57, reviewed by Peter A. Lindstrom
Elementary Statistics, Robert R. Johnson, 5:2, 1974, 59, reviewed by Philip F. Reichmeider
Basic Algebra Techniques: Concepts and Manipulations, W. Burril McWaters and Anita McWaters and Robert L. Drennen, 5:3, 1974, 41-42, reviewed by Eugene P. Cooper
Mathematics with Applications in the Management, Natural, and Social Sciences, Margaret L. Lial and Charles D. Miller, 5:3, 1974, 42, reviewed by H. Eugene Hall
Applied Mathematics for Technical Programs (Trigonometry), Robert G. Moon, 5:3, 1974, 42-43, reviewed by Amogene F. DeVaney
Mathematics and Liberal Arts, Jack C. Gill, 5:4, 1974, 31-32, reviewed by Cameron Douthitt
Analytic Geometry with Vectors, Douglas F. Riddle, 5:4, 1974, 32, reviewed by Don Gallagher
Linear Algebra, Paul J. Knopp, 5:4, 1974, 32-33, reviewed by Shelba Morman
Linear Mathematics, Philip Gillett, 5:4, 1974, 34, reviewed by Peter A. Lindstrom
Precalculus Mathematics: A Functional Approach, James Connelly and Robert Fratangelo, 6:1, 1975, 28-29, reviewed by Lawrence Gillagan
Elementary Algebra, 1st ed., Robert G. Moon and Robert D. Davis, 6:1, 1975, 29, reviewed by Thomas L. Alexander
Conceptions of Space, Beginning Geometries for College, William Hemmer, 6:3, 1975, 27-28, reviewed by Jean B. Smith
Basic Mathematics for Management and Economics, Lyman C. Peck, 6:3, 1975, 28, reviewed by Cherry Mauk
Fundamental Math—A Mixed Media Program, Units I-IV, 6:3, 1975, 28-29, reviewed by R. DeJean
Mathematics—A Human Endeavor, Harold R. Jacobs, 6:4, 1975, 19, reviewed by Gerald M. Smith
Introduction to Finite Mathematics, 3rd ed., John G. Kemeny and J. Laurie Snell and Gerald L. Thompson, 6:4, 1975, 19-20, reviewed by Bruce King
Plane Trigonometry, A New Approach, C. L. Johnson, 7:1, 1976, 24-25, reviewed by Nancy Holder
Contemporary Mathematics, Bruce E. Meserve and Max A. Sobel, 7:1, 1976, 25-26, reviewed by James G. Troutman
Elementary Algebra: A Worktext, Vivian Shai Groza, 7:1, 1976, 25, reviewed by Ken Seydel
Introductory Algebra, Alphonse Gobran, 7:2, 1976, 40-41, reviewed by John P. Pace
Developing Skills in Algebra: A Lecture Work-text, J. Louis Nanny and John L. Cable, 7:2, 1976, 41-42, reviewed by Wesley W. Tom
Elementary Functions and Analytic Geometry, Flanders and Price, 7:3, 1976, 39-40, reviewed by Mary Ann DeVincenzo
Carl Friedrich Gauss, A Biography, Tord Hall, 7:3, 1976, 40, reviewed by Ralph Mansfield
Ingenuity in Mathematics, Ross Honsberger, 7:4, 1976, 26-27, reviewed by Peter A. Lindstrom
Mathematical Gems, Ross Honsberger, 8:1, 1977, 35-36, reviewed by Peter A. Lindstrom
Fortran IV Programming and Applications, C. Joseph Sass, 8:1, 1977, 36-37, reviewed by Mary Ann DeVincenzo
Statistics, Norma Gilbert, 8:2, 1977, 88-89, reviewed by Leland D. Graber
Calculus, A Practical Approach, Kenneth Kalmanzon and Patricia C. Kenschaft, 8:2, 1977, 89, reviewed by Dennis M. Rodriguez
Fundamental Mathematics (filmstrips), James Streeter and Gerald Alexander, 8:3, 1977, 165-166, reviewed by John McGregor
Differential Equations and Their Applications: An Introduction to Applied Mathematics, Martin Braun, 8:4, 1977, 231-232, reviewed by David Farnsworth
The Mathematics of the Elementary School, Edward G. Begle, 8:5, 1977, 281-282, reviewed by David E. Moxness
The Power of Relevant Mathematics: Basic Concepts, Kenneth L. Whipkey and Mary Nell Whipkey and Joanne Jarocki, 8:5, 1977, 282, reviewed by Jean B. Smith
Essentials of Precalculus Mathematics, Dennis T. Christy, 9:3, 1978, 167-168, reviewed by Jean Lane
The Ages of Mathematics (4 volumes), Michael Moffatt and Charles Flinn and Cynthia Conwell Cook and Peter D. Cook, 9:4, 1978, 222-224, reviewed by Frank Swetz
Understanding and Programming Computers, Samiha Mourad, 9:5, 1978, 288-289, reviewed by Mary Ann DeVincenzo
The Psychology of Learning Mathematics, Richard R. Skemp, 10:1, 1979, 44-45, reviewed by Shelba Jean Morman
Analytic Trigonometry with Applications, Raymond A. Barnett, 10:1, 1979, 45-46, James C. Kropa
Analytic Geometry and the Calculus, 3rd ed., A. W. Goodman, 10:2, 1979, 123-124, reviewed by Donald C. Fuller
Why the Professor Can't Teach: Mathematics and the Dilemma of University Education, Morris Kline, 10:3, 1979, 205-206, reviewed by Elaine Johnson Tatham
Mathematical Recreations and Essays, W. W. Rouse Ball and H. S. M. Coxeter, 10:4, 1979, 283-286, reviewed by G. L. Alexanderson
Elementary Number Theory, David M. Burton, 10:4, 1979, 287-288, reviewed by Henry J. Ricardo
The Historical Roots of Elementary Mathematics, Lucas N. H. Bunt, 10:4, 1979, 288-289, reviewed by Barnabas Hughes
An Introduction to Mathematical Models in the Life and Social Sciences, Michael Olinick, 10:5, 1979, 355-356, reviewed by Kenneth E. Martin
What is the Name of This Book?, Raymond M. Smullyan, 11:1, 1980, 56-58, reviewed by Klaus Galda
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Mathematically Speaking, Morton Davis, 12:1, 1981, 58-59, reviewed by Marilyn Mays Gilchrist
Overcoming Math Anxiety, Sheila Tobias, 12:1, 1981, 59-61, reviewed by Henry Africk
Mind Over Math, Stanley Kogelman and Joseph Warren, 12:1, 5-61, reviewed by Henry Africk
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The Mathematical Experience, Philip J. Davis and Reuben Hersh, 13:1, 1982, 72-73, reviewed by Henry S. Tropp
The Real World and Mathematics, Hugh Burkhardt, 14:1, 1983, 81-82, reviewed by H. O. Pollak
Great Moments in Mathematics (Before 1650 and After 1650), Howard Eves, 14:3, 1983, reviewed by R. P. Boas
Infinite Processes/Background to Analysis, A. Gardner, 14:4, 1983, 365-366, reviewed by G. L. Alexanderson
Maxima and Minima Without Calculus, Ivan Niven, 14:5, 1983, 415, reviewed by Lester H. Lange
Neyman—from life, Constance Reid, 15:1, 1984, 82-84, reviewed by Robert V. Hogg
The Fractal Geometry of Nature, Benoit B. Mandelbrot, 15:2, 1984, 175-177, reviewed by Don Chakerian
Mir Publishers' Series (Moscow), 15:3, 1984, 281-282, reviewed by Peter J. Hilton
Lectures in Geometry: Analytic Geometry, M. M. Postnikov, 15:3, 1984, 282-283, reviewed by Peter J. Hilton
The Future of College Mathematics, Anthony Ralston and Gail S. Young, eds., 15:5, 1984, 458-460, reviewed by Stephen B. Maurer
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New Directions in Two-Year College Mathematics, Donald J. Albers, ed., 16:3, 1985, 242-247, reviewed by Philip Cheifetz
Superior Beings. If They Exist, How Would We Know?: Game-Theoretic Implications of Omniscience, Omnipotence, Immortality, and Incomprehensibility, Steven J. Brams, 16:5, 1985, 430-431, reviewed by Thomas P. Faase
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Mathematics: People, Problems, Results, Douglas M. Campbell and John C. Higgins, eds., 17:1, 1986, 108-109, reviewed by Philip J. Davis
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Advanced Mathematical Thinking, Tommy Dreyfus, et al., 22:3, 1991, 268, reviewed by Annie Selden
Not Knot (video), Geometry Center of the University of Minnesota, 24:2, 1993, 197-198, reviewed by Mark Kidwell
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The Search for E. T. Bell, Constance Reid, 25:3, 1994, 253-254, reviewed by Underwood Dudley
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The Mathematical Traveler: Exploring the Grand History of Numbers, Calvin C. Clawson, 26:5, 1995, 417-418, reviewed by Frank Swetz
Shadows of the Mind, Roger Penrose, 27:2, 1996, 162-163, reviewed by Peter Hilton
How to Teach Mathematics: A Personal Perspective, Sten G. Krantz, 27:4, 1996, 324, reviewed by John A. Dossey
Crossroads in Mathematics: Standards for Introductory College Mathematics before Calculus, American Mathematical Association of Two-Year Colleges, 27:5, 1996, 416-417, reviewed by Donald W. Bushaw
Learn from the Masters, Frank Swetz; et al; editors, 28:3, 1997, 245-246, reviewed by William Dunham
Mathematics and Politics, Alan D. Taylor, 28:4, 1997, 328-329, reviewed by Philip D. Straffin
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Women in Mathematics: The Addition of Difference, Claudia Henrion, 30:1, 1999, 77-80, reviewed by Anita E. Solow
Mathematics of the 19th Century, Edited by A. N. Kolmogorov and A. P. Yushkevich, 30:2, 1999, 159-161, reviewed by John Ewing
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State Mathematics Standards, Ralph A. Raimi and Lawrence S. Braden, 30:5, 1999, 425-428, reviewed by Mark Saul
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Math Through the Ages: A Gentle History for Teachers and Others, William P. Berlinghoff and Fernando Q. Gouvea, 34:5, 2003, 423, reviewed by Frank Swetz
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The Lost Millennium: History’s Timetables under Siege, Florin Diacu, 44:1, 2013, 62-63, reviewed by Richard Olson
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The Manga Guide to Linear Algebra, Shin Takahashi (illustrated by Iroha Inoue) and Math Girls, Hiroshi Yuki, 44:3, 2013, 244-247 (also 184, 201, 232), reviewed by Susan Jane Colley
Book Review: Mathematics for the Environment, Martin Walter, 44:5, 2013, 446-448, reviewed by Ben Fusaro
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