

# Outside Reading Suggestions

Winter Quarter, 2010,

Wil Clarke—January 12, 2010,

*The following articles are all available at the periodical desk of the La Sierra University Library.*

## General Interest

- Osler, Thomas "Five historic formulas for pi," *Math Comp Ed* Fall 2009, p250
- Barbour, Robert "A manifesto for mathematics," *Math Gaz* Nov 2009, p386
- Hoare, Graham "Bernhard Riemann's legacy of 1859," *Math Gaz* Nov 2009, p468
- Ganesh, Bibi "Development of a geometric spatial visualization tool," *Sch Math & Sci* Dec 2009, p461
- Carroll, William "Tangent lines without derivatives for quadratic and cubic equations," *Math Teach* Mar 2009, p516
- Simoson, Andrew "Maximizing the spectacle of water fountains," *Coll Math J* Sep 2009, p263
- Hartter, Beverly "A function or not a function? That is the question," *Math Teach* Oct 2009, p201
- Quenell, Gregory "Envelops and String Art," *Math Mag* Jun 2009 p174
- Bartlow, Thomas "Who was Miss Mullikin?" *Monthly* Feb 2009 p99
- Brown, Ezra "Kirkman's schoolgirls wearing hats and walking through fields of numbers," *Math Mag* Feb 2009, p3
- Provan, Scott "Sudoku: strategy versus structure," *Monthly* Oct 2009, p702
- Hailman, Dan "Keeping dry: the mathematics of running in the rain," *Math Mag* Oct 2009 p266
- Frantz, Marc "A fractal made of golden sets," *Math Mag* Oct 2009 p243
- Craik, Alex "A proportional view: The mathematics of James Glenie (1750-1817)," *Hist Math* Aug. 2009, p247
- Abeles, Francine "Review of *Lewis Carrol in Numberland: His Fantastical Mathematical Logical Life*," *Hist Math* Aug. 2009, p287
- Fox, Douglas "Thinking machine: the future of computing may depend on embracing the chaos that defines the human brain," *Discover* Oct 2009, p58
- Lloyd, Seth "Privacy and the quantum Internet," *Sc Amer* Oct 2009, p80
- Penrose, Roger "Time to overthrow quantum physics?" *Discover* Sep 2009, p54
- McGowan, Kathleen "Seven deadly sins," *Discover* Sep 2009, p49
- Campbell-Kelly, Martin "Origin of computing," *Sc Amer* Sep 2009, p62
- Gueron, Eduardo "Adventures in curved spacetime," *Sc Amer* Aug 2009, p38
- Provan, Scott "Sudoku: strategy versus structure," *Monthly* Oct 2009, p702
- Gardner, Martin "L-tromino tiling of mutilated chessboards," *Coll Math J* May 2009, p162
- Bailey, Herb "Jeeps penetrating a hostile desert," *Coll Math J* May 2009, p182
- Edwards, Wichael "Who was the real William Shakespeare?" *Math Teach* Apr 2009, p580
- Jones, Michael "The geometry behind paradoxes of voting power," *Math Mag* Apr 2009, p103
- Kalish, Arthur "Extending the classical geometry problem," *Math Teach* Apr 2009, p634
- Feist, Curtis "Topology explains why automobile sunshades fold oddly," *Coll Math J* Apr 2009, p93
- Sultan, Alan "CORDIC: how hand calculators calculate," *Coll Math J* Apr 2009, p87
- Kaplan, Gail "Playing with dominos," *Math Teach* Feb 2009, p426
- Grabiner, Judith "Why did Lagrange 'prove' the parallel postulate?" *Monthly* Jan 2009, p3
- Rauff, James "The way back from anywhere: exploring the road coloring conjecture," *Math & Comp Ed* Winter 2009, p6
- Rice, Blake "The Elgamal cryptosystem on the TI-83," *Math & Comp Ed* Winter 2009, p29
- Munakata, Mika "Mathematical representations at the National Art Gallery," *Math & Comp Ed* Winter 2009, p47
- Simoson, Andrew "Solomon's sea and  $\pi$ ," *Coll Math J* Jan 2009, p22
- Paterson, Mike "Overhang," *Monthly* Jan 2009, p3
- Bosveld, Jane "A tribe without numbers," *Discover* Jan 2009, p44

## Calculus

- Dempsey, Michael "Cookies & Pi," *Math Teach* May 2009, p686
- Kalman, Dan "Leveling with Lagrange: an alternate view of constrained optimization," *Math Mag* Jun 2009 p186
- Dence, Thomas "A survey of Euler's constant," *Math Mag* Oct 2009 p255
- Ellis-Davies, Arthur "The hyper-exponential function  $\text{hyp}(x)=x^{x^{\dots}}$  : an exercise in convergence," *Math Gaz* July 2009, p193
- Osler, Thomas "A modern look at a neglected summation formula by Euler," *Math Gaz* July 2009, p237

## Geometry

- Freeman, Timothy, "Int J Math Ed Dec 2009, p1118
- Osler, Thomas "Five historic formulas for pi," *Math Comp Ed* Fall 2009, p250
- Abramovich, Sergei "Evolviing polygons revisited: inequalities and computer graphing," *J Comp Math* v28 no 4 2009, p345
- Kichenassamy, Satyanad "Brahmagupta's derivation of the aread of a cyclic quadrilateral," *Hist Math* Feb 2010, p28
- Ayoub, Ayoub "The centroid of a quadrilateral region," *Math Comp Ed* Fall 2009, p206
- Bradley, C. J. "Conjugation 2: Conjugate lines in a triangle," *Math Gaz* Nov 2009 p420
- Ganesh, Bibi "Development of a geometric spatial visualization tool," *Sch Math & Sci* Dec 2009, p461
- Touval, Ayana "Waling a radian," *Math Teach* May 2009, p692
- Kenyon, Richard "branched polymers," *Monthly* Aug 2009, p612
- Apostol. Tom "New insight into cycloidal areas," *Monthly* Aug 2009, p598
- Cox, Barry "Mechanical circle-squaring," *Coll Math J* Sep 2009, p238
- Kaufmann, Matthew "Want to play geometry?" *Math Teach* Oct 2009, p190
- Linares, Leanne "Proof Mapping," *Math Teach* Nov 2009 p259
- Hailman, Dan "Keeping dry: the mathematics of running in the rain," *Math Mag* Oct 2009 p266
- Frantz, Marc "A fractal made of golden sets," *Math Mag* Oct 2009 p243
- Gueron, Eduardo "Adventures in curved spacetime," *Sc Amer* Aug 2009, p38
- Chemla, Karine "On mathematical problems as historically determined artifacts: Reflections inspired by sources from ancient China," *Hist Math* Aug. 2009, p213
- Beardon, Alan "Geoboards, polygons and Pick's Theorem," *Math Gaz* July 2009, p228
- Erbas, Ayhan "Reexamining Archimedes' quadrature of the parabola with dynamic geometry," *Math & Comp Ed* Spring 2009, p165
- Li, Ming-Sun "On numbers equal to the sum of two squares in more than one way," *Math & Comp Ed* Spring 2009, p102
- Mabry, Rick "Of cheese and crust: a proof of the pizza conjecture and other tasty results," *Monthly* May 2009, p423
- Fink, Alex "Rick's tricky six puzzle:  $S_5$  sits specially in  $S_6$ ," *Math Mag* Apr 2009, p83
- Jones, Michael "The geometry behind paradoxes of voting power," *Math Mag* Apr 2009, p103
- Norton, Anderson "Eighty-eight thousand, four hundred and eighteen (more) ways to fill space," *Coll Math J* Apr 2009, p108
- Kocik, Jerzy "Disentangling a triangle," *Monthly* Mar 2009, p228
- Apostol, Tom "A new look at the so called trammel of Archimedes," *Monthly* Feb 2009 p115
- Haase, Christian "Lattice polygons and the number  $2i + 7$ ," *Monthly* Feb 2009 p151
- Kalish, Arthur "Extending the classical geometry problem," *Math Teach* Apr 2009, p634
- Grabiner, Judith "Why did Lagrange 'prove' the parallel postulate?" *Monthly* Jan 2009, p3
- Pratt, Vaughn "Factoring Heron," *Coll Math J* Jan 2009, p15
- Simoson, Andrew "Solomon's sea and  $\pi$ ," *Coll Math J* Jan 2009, p22

### **Abstract Algebra**

- Speyer, David "Tropical Mathematics," *Math Mag* Jun 2009 p163
- Schultz, Kyle "Soft drinks, mind reading, & number theory," *Math Teach* Nov 2009 p279
- Crans, Alissa "Musical actions of dihedral groups," *Monthly* June 2009, p479
- Daughtery, Zaji "Voting, the symmetric group and representation theory," *Monthly* Oct 2009, p667
- Bhargava, Mira "Groups as unions of proper subgroups," *Monthly* May 2009, p413
- Heath, Daniel "Symmetric and alternating groups generated by a full cycle and another element," *Monthly* May 2009, p447
- Fejzic, H. "Descartes' rule of signs, alternations of data sets, and balanced differences," *Monthly* Apr 2009, p316
- Mercer, Idris "On Furstenberg's proof of the infinitude of primes," *Monthly* Apr 2009, p355
- Oman, Greg "An independent axiom system for the real numbers," *Coll Math J* Mar 2009, p78
- Bullyncck, M. "Modular arithmetic before C.F. Gauss," *Hist Math* Feb 2009, p48
- Ferreño, Natalia "Yet another proof of the irrationality of  $\sqrt{2}$ ," *Monthly* Jan 2009, p68
- Schep, Anton "A simple complex analysis and an advanced calculus proof of the Fundamental Theorem of Algebra," *Monthly* Jan 2009, p67

### **Linear Algebra**

- Zhu, Katherine "A classroom project on protecting Social Security Numbers from identity theft," *Math Comp Ed* Fall 2009, p216
- Beardon, Alan "Prime matrices and prime polynomials," *Math Gaz* Nov 2009 p433
- Proulx, Jerome "Rethinking the teaching of systems of equations," *Math Teach* Mar 2009, p526

- Martin, Greg “Almost no integer matrices have no integer eigenvalues,” *Monthly* Aug 2009, p588  
 Boman, Eugene “False Position, Double false position and Cramers’ rule,” *Coll Math J* Sep 2009, p279  
 Szydlik, Stephen “The problem with the snack food problem,” *Math Teach* Aug 2009, p18  
 Neel, David “Matroids I have known,” *Math Mag* Feb 2009, p26  
 Provan, Scott “Sudoku: strategy versus structure,” *Monthly* Oct 2009, p702  
 Shi, Yixum “Applications of a particular linear transformation: teaching analytic geometry and linear algebra,” *Math & Comp Ed* Spring 2009, p109  
 O’Brien, Thomas “Analysis and design of known magic squares and cubes utilizing base- $n$  arithmetic,” *Math & Comp Ed* Spring 2009, p121  
 Liu, Andy “Two applications of a Hamming Code,” *Coll Math J* Jan. 2009, p2

### Analysis and Sets & Numbers

- Skurnick, Ronald “An alternative proof of the infinitude of the prime numbers,” *Math Comp Ed* Fall 2009, p248  
 McAndrew, Alasdair “Mathematical induction, difference equations and divisibility,” *Int J Math Ed* Dec 2009, p1013  
 Tefera, Akalu “Freshman rules in calculus,” *Int J Math Ed* Dec 2009, p1091  
 Burke, Maurice “using CAS to solve classical mathematics problems,” *Math Teach* May 2009, p672  
 Wanko, Jeffrey “The infinite hotel,” *Math Teach* Mar 2009, p498  
 Baruah, Nayandeep “Ramanujan’s series for  $1/\pi$ : a survey,” *Monthly* Aug 2009, p567  
 Chen, Hongwei “The Fresnel integrals revisited,” *Coll Math J* Sep 2009, p259  
 Perrin, John “An intriguing exponential inequality,” *Math Teach* Aug 2009, p50  
 Dunham, William “When Euler met l’Hopital,” *Math Mag* Feb 2009, p16  
 McFeeters, Janelle “Games of Logic,” *Math Teach* Nov 2009 p285  
 Barbanel, Julius “Cutting a pie is not a piece of cake,” *Monthly* June 2009, p496  
 Calcut, Jack “Gaussian integers and arctangent identities for  $\pi$ ,” *Monthly* June 2009, p515  
 Ellis-Davies, Arthur “The hyper-exponential function  $\text{hyp}(x) = x^{x^{x^{\dots}}}$ : an exercise in convergence,” *Math Gaz* July 2009, p193  
 Osler, Thomas “A modern look at a neglected summation formula by Euler,” *Math Gaz* July 2009, p237  
 Harding, Ansie “Sibling curves 3: imaginary siblings and tracing complex roots,” *Int J Math Ed*, Oct 2009, p989  
 Barnsley, Michael “Transformations between self-referential sets,” *Monthly* Apr 2009, p291  
 Gordon, Russell “Some integrals involving the Cantor function,” *Monthly* Mar 2009, p228  
 Ferreño, Natalia “Yet another proof of the irrationality of  $\sqrt{2}$ ,” *Monthly* Jan 2009, p68

### History of Math

- Bullynck, M. “Modular arithmetic before C.F. Gauss,” *Hist Math* Feb 2009, p48  
 Grabiner, Judith “Why did Lagrange ‘prove’ the parallel postulate?” *Monthly* Jan 2009, p3  
 Kichenassamy, Satyanad “Brahmagupta’s derivation of the area of a cyclic quadrilateral,” *Hist Math* Feb 2010, p28  
 Hoare, Graham “Bernhard Riemann’s legacy of 1859,” *Math Gaz* Nov 2009 p468

### Key

- Coll Math J* = The College Mathematics Journal  
*Discover* = Discover  
*Hist Math* = Historia Mathematica  
*Int J Math Ed* = International Journal of Mathematical Education in Science and Technology  
*J Comp Math* = Journal of Computers in Mathematics and Science Teaching  
*J Research Math Ed* = Journal for Research in Mathematics Education  
*Math & Comp Ed* = Mathematics and Computer Education  
*Math Gaz* = Mathematical Gazette  
*Math Horiz* = Math Horizons  
*Math Mag* = Mathematics Magazine  
*Math Teacher* = Mathematics Teacher  
*Monthly* = The American Mathematical Monthly  
*Primus* = Primus  
*Quantum* = Quantum  
*Sch Sci & Math* = School Science and Mathematics  
*Sc Amer* = Scientific American