

# THE MATHEMATICS TEACHER

*An Official Journal of  
The National Council of Teachers of Mathematics  
(Incorporated)*



*Classified Index  
Volume LVII  
1964*

EDITORIAL OFFICE

*Irvin H. Brune, Bowling Green State University,  
Bowling Green, Ohio*

## Author index

- ADKINS, JULIA. Leave the door open! Nov., 485.
- ALLEN, FRANK B. The Council's drive to improve school mathematics—a progress report. Oct., 370-78.
- ALTSHILLER-COURT, NATHAN. The dawn of demonstrative geometry. Mar., 163-66.
- AVERS, PAUL W. A unit in high school geometry without the textbook. Mar., 139-42.
- BARTELS, ROBERT A. Review of materials, *Sets in Geometry*, Marks, Smart, and Purdy; Ginn, 1963. May, 348.
- BAUGHMAN, GERALD D. Review of *The New Mathematics in Practice—Book III*, Metzner, Kaplan, and Weiss; Franklin Publishing and Supply, 1963. May, 342-43.
- BAYLOCK, ADRIAN. Graphical interpretation of the limit of an indeterminate function. Feb., 104-05.
- BECKER, JERRY P. On solutions of geometrical constructions utilizing the compasses alone. Oct., 398-403.
- BISSINGER, BARNARD H.: Science for a day. Dec., 546-51.
- BLANK, WILLIAM R. A survey concerning advanced mathematics curriculum. Apr., 208-11.
- BOLDING, JAMES. A look at discovery. Feb., 105-06.
- BORGIA, SISTER M. FRANCIS. Review of *Algebra Two*, Hayden and Fischer; Allyn and Bacon, 1963. Mar., 169.
- . Review of *Self-Teaching Intermediate Algebra*, Howes; John Wiley, 1963. Mar., 171-72.
- BOYER, CARL B. Myth, the muse, and mathesis. Apr., 242-53.
- BRADLEY, JAMES A., JR. Some remarks concerning families of circles and radical axes. Dec., 533-36.
- BRUNE, IRVIN H. A fitting tribute. Nov., 482-83.
- . Seven good years. Oct., 41-12.
- CARSS, MARJORIE. Review of filmstrips, *Measurements Are for a Purpose*, Hare; Admaster Prints, 1962. Dec., 559.
- CHACHERE, MARVIN L. The logic of absolute value inequalities. Feb., 73-74.
- CLINE, KATHERINE H. Review of booklet, *Random Numbers, Mathematical Induction, Geometric Numbers*, Young; Ginn, 1962. Oct., 414.
- COMFORT, JOSEPH J. Permutations from a different point of view. Mar., 152-53.
- CONDIT, MARTHA C. From algebra to geometry in four easy lessons. Jan., 40-41.
- CONSTANTIA, SISTER MARY. Dr. Hopkins' proof of the angle bisector problem. Dec., 539-41.
- COXFORD, ARTHUR F., JR. Geometric diversions: a 25-point geometry. Dec., 561-64.
- DEANS, EDWINA. Review of *Enrichment Mathematics for the Grades*, 27th Yearbook; National Council of Teachers of Mathematics, 337-38.
- DENNIS, J. RICHARD. Review of *Contemporary Algebra, Book One*, Smith, Lankford, and Payne; Harcourt, Brace & World, 1962. Feb., 98-99.
- DILLEY, CLYDE. Review of *Elementary Logic for Secondary Schools*, Brant and Keedy; Holt, Rinehart & Winston, 1962. Mar., 170-71.
- DOBYNS, ROY A. An experiment in the teaching of college algebra. Feb., 86-88.
- DRAIM, N. A. Spinning out the square root of an integer. Dec., 542-45.
- DUPREE, DANIEL E. The equivalence of a given collection of statements. Apr., 240-41.
- EADS, LAURA K. Review of *For the Teaching of Mathematics*, Vols. 1-3, Gattegno; Lampport Bilbert, 1963. May, 338-39.
- EASTERDAY, KENNETH E. An experiment with low achievers in arithmetic. Nov., 462-68.
- ELKIN, JACK M. Repeating decimals and tests for divisibility. Apr., 215-18.
- EVANS, ETHEL M. Review of *The Complete Book of Slide Rule Use*, Ritow; Doubleday, 1963. Mar., 169-70.
- . Review of *Understanding the Slide Rule*, Graesser; Littlefield, Adams, 1963. Mar., 173.
- EVES, HOWARD. *Editor*. Historically speaking, —. Jan., 26-32; Feb., 89-97; Mar., 163-68; Apr., 242-53; May, 323-32; Oct., 406-10; Nov., 479-81; Dec., 552-55.
- . A comment on Professor Charles L. Smith's paper "On the origin of '>' and '<'." Nov., 481.
- FALBO, C. E. Some axioms for teaching real exponents. Apr., 212-14.
- FAWCETT, HAROLD P. Reflections of a retiring teacher of mathematics. Nov., 450-56.
- FERGUSON, W. EUGENE. Current reforms in the mathematics curricula—a passing phase or progress? Mar., 143-48.
- FESER, FATHER VICTOR, O.S.B. Sum equals product. May, 310-12.
- FOGO, JAMES D. Linear indeterminate problems. Apr., 223-25.
- FORSYTHE, ALEXANDRA. Review of *Algebra with Trigonometry*, Fehr, Carnahan, and Beberman; D. C. Heath, 1963. May, 335-36.
- . Mathematics and computing in high school: a betrothal. Jan., 2-7.
- FRAME, J. S. Facilities for secondary school mathematics. Oct., 379-91.
- GARCÍA, MARIANO. Two decades of mathematical education in Puerto Rico. Apr., 235-39.
- GATES, JAMES D. Membership report. Nov., 493.
- GIBBS, VIRGINIA J. Review of booklet, *U-Dial-It, A Brief Review of Arithmetic*, Cathey; author. May, 348.
- GILLINGS, R. J. The volume of a truncated pyramid in ancient Egyptian papyri. Dec., 552-55.
- GRAMANN, RICHARD H. A queueing simulation. Feb., 66-72.
- GRANITO, DOLORES. What to do in a mathematics club. Jan., 35-39.
- GREENHOLZ, SARAH. What's new in teaching



- slow learners in junior high school? Dec., 522-28.
- GUGGENBUHL, LAURA. The New York fragments of the Rhind Mathematical Papyrus. Oct., 406-10.
- HAILPERN, RAOUL. The link method in trigonometry. Nov., 469-71.
- HAMMER, PRESTON C. The role and nature of mathematics. Dec., 514-21.
- HARMEING, HENRY, JR. Using historical stories to stimulate interest in mathematics. Apr., 258-59.
- HARRIS, EDWARD M. Geometric intuition and  $\sqrt{ab} \leq (a+b)/2$ . Feb., 84-85.
- HENDERSON, KENNETH B. *Editor*. Reviews and evaluations. Jan., 33-34; Feb., 98-103; Mar., 169-73; Apr., 254-56; May, 335-48.
- HESSE, ALLEN R. Iterative methods in high school algebra. Jan., 16-19.
- HIGHT, DONALD W. The limit concept in the SMSG revised sample textbooks. Apr., 194-99.
- HILL, JANE M. A bibliography on the changing curriculum in secondary school mathematics. Mar., 154-59.
- HOHN, FRANZ E. Review of "Topics in Mathematics," fourteen volumes translated from Russian; D. C. Heath, 1963. Apr., 255-56.
- HOLCOMB, JOHN D. A Christmas graph. Dec., 560-61.
- HOLTAN, BOYD. Motivation and general mathematics students. Jan., 20-25.
- JONES, PHILLIP S. Review of *The Calculus, A Genetic Approach*, Toeplitz; University of Chicago, 1963. May, 336-37.
- JORDY, JAMES L. A comparative study of methods of teaching plane geometry. Nov., 472-78.
- KALMAN, KARL S. Review of *Mathematics—A Modern Approach*, Wilcox and Yarnelle; Addison-Wesley, 1963. Feb., 103.
- KANER, SAMUEL. Discovering the centroid of a quadrilateral by construction. Nov., 484-85.
- KAPLAN, JEROME D. An example of student-generated sequences in mathematics instruction. May, 298-302.
- KARNES, HOUSTON T. Minutes of the Annual Business Meeting. Oct., 417-21.
- . The 1964-65 budget. Oct., 423.
- KING, BRUCE W. Snowflake curves. Apr., 219-22.
- KLINGLER, DONN L. Structuring a proof. Apr., 200-02.
- KREIDER, ORLANDO C. Review of *Algebra: An Introduction to Finite Mathematics*, Rose; John Wiley, 1963. May, 335.
- LANE, BENNIE R. An experiment with programmed instruction as a supplement to teaching college mathematics by closed-circuit television. Oct., 395-97.
- LANTZ, WILLIAM B. Review of *The Slide Rule and Technical Problem Solving*, Leach and Beakley; Macmillan, 1963. Mar., 172.
- LEAKE, LOWELL, JR. An iterative application for elementary algebra. Jan., 12-15.
- LESLIE, DONALD P., JR. Review of *Modern Algebra and Trigonometry, Structure and Method*, Book 2, Dolciani, Berman, and Wootan; Houghton Mifflin, 1963. May, 340-41.
- LEVY, HARRY. The role of geometry in the eleventh and twelfth grades. Mar., 130-38.
- . Review of *A Survey of Geometry*, Vol. 1, Eves; Allyn and Bacon, 1963. May, 344-45.
- LICHTENBERG, D. R. Review of film, *Equations in Algebra*; International Film Bureau. Oct., 413.
- . Review of film, *Possibly So, Pythagoras*; International Film Bureau. Oct., 413-14.
- LITVAK, BARRY. History of group theory leading to the development of infinite abelian groups. Jan., 30-32.
- LOYD, DANIEL B. Finding rational roots by modular methods. Feb., 79-81.
- LOWRY, WILLIAM C. Review of *The Language of Mathematics*, Land; Doubleday, 1963. Feb., 101-03.
- . *Editor*. Tips for beginners. Jan., 35-41; Feb., 104-07; Apr., 257-59; May, 349-54.
- LUX, J. R. Review of booklet, *Multi-Sensory Techniques in Mathematics Teaching*, Krulik and Kaufman; Teachers Practical Press, 1963. May 347-48.
- MCCAMMAN, CAROL V. A bibliography on the changing curriculum in secondary school mathematics. Mar., 154-59.
- . Review of *A Programmed Introduction to Vectors*, Carman; John Wiley, 1963. Mar., 171.
- MCLEAN, ROBERT C. On numbers and numerals. Mar., 174-75.
- MAIERS, WESLEY W. Introduction to non-Euclidean geometry. Nov., 457-61.
- MALERICH, SISTER ANTONE. A new look at enrichment. May, 349-51.
- MARIE, SISTER TERESA, O.S.F. An analysis of elementary functions for high school students. May, 307-09.
- MARY OF MERCY, SISTER, FITZPATRICK. Saccheri, forerunner of non-Euclidean geometry. May, 323-32.
- MASTBAUM, SOL. Review of *Exploring Modern Mathematics, Book 2*, Keedy, Jameson, and Johnson; Holt, Rinehart & Winston, 1963. Jan., 34.
- MILLER, G. H. The evolution of group theory. Jan., 26-30.
- MILLER, VINNIE H. A property of the discriminant. Feb., 82-83.
- MORTON, ROBERT L. Pascal's triangle and powers of 11. Oct., 392-94.
- MYERS, DONALD E. Irrationals, area, and probability. Apr., 203-07.
- NICHOLS, EUGENE D. *Editor*. Experimental programs. Jan., 20-25; Feb., 86-88; Mar., 160-62; Oct., 404-05. Nov., 472-78; Dec., 546-51.
- NYGAARD, P. H. Iteration solution methods. Jan., 8-11.
- OTTERSON, CAROL L. Review of *New Understanding in Arithmetic*, Smart; Allyn and Bacon, 1963. May, 343-44.
- PAYNE, JOSEPH N. *Editor*. Tips for beginners. Jan., 35-41; Feb., 104-07; Apr., 257-59; May, 349-54; Oct., 415-16; Nov., 484-85; Dec., 560-64.



- PEAK, PHILIP. *Editor*. Have you read? Jan., 15, 25; Feb., 78; Mar., 168; Apr., 211, 232; May, 354; Nov., 456; Dec., 541.
- PETTYPOOL, CHARLES E. Review of *Contemporary Algebra, Book Two*, Smith, Lankford, and Payne; Harcourt, Brace & World, 1963. Jan., 33-34.
- PIKAART, LEONARD. Review of *The Language of Mathematics*, Land; Doubleday, 1963. Feb., 101-03.
- PINGRY, ROBERT E. Thanks. May, 333-34.
- PIXLEY, LORDEEN W. Mathematics in the community junior college. May, 313-16.
- PURSELL, LYLE E. Approximating an angle division by a sequence of bisections. Dec., 529-32.
- RABUFFETTI, HEBE. Review of materials, *Constructions in Geometry*, La Nuova Italia. Oct., 413.
- RANDOLPH, PAUL H. An experiment in programmed instruction in junior high school. Mar., 160-62.
- RECKZEH, JOHN. Review of *Algebra, A Modern Approach I*, Peters and Schaaf; Van Nostrand, 1963. Apr., 254-55.
- . Review of *Groups and Fields*, Earl, Moore, Smith; McGraw-Hill, 1963. May, 339.
- ROSENBLOOM, P. C. Review of *Wff'n Proof, The Game of Modern Logic*, Allen; book and kit, author. May, 346-47.
- RYOTI, DON E. Review of *Geometry, Plane, Solid, Coordinate*, Morgan and Zartman; Houghton Mifflin, 1963. Feb., 100-01.
- SALKIND, C. T. Annual high school mathematics contest. Feb., 75-78.
- SCHAAF, WILLIAM L. How modern is modern mathematics? Feb., 89-97.
- SHULTE, ALBERT P. Pythagorean mathematics in the modern classroom. Apr., 228-32.
- SHURLOW, HAROLD J. The greatest integer function? Apr., 226-27.
- SITOMER, HARRY. Coordinate geometry with an affine approach. Oct. 404-05.
- SLOOK, THOMAS H. Designing RAPID, an analogue computer. Mar., 149-51.
- SMITH, CHARLES L. On the origin of ">" and "<". Nov., 479-81.
- SMITH, JOE K. Discovery of patterns in the difference of two squares. May, 351-54.
- SMITH, LEANDER W. A dialogue on two triangles. Apr., 233-34.
- SNYDER, HENRY D. An impromptu discovery lesson in algebra. Oct., 415-16.
- SPENCER, RICHARD V. Discovery of basic inversion theory by construction. May, 303-06.
- STEELE, SISTER M. PHILIP, O.P. Review of *Vectors*, Barnett and Fujii; John Wiley, 1963. May, 345.
- STOVER, DONALD W. Projectiles. May, 317-22.
- STRIJK, D. J. The Kensington stone mystery. Mar., 166-68.
- SVENDSEN, ELINE. Review of *Modern Algebra, Second Course*, Johnson, Lendsey, Slesnick, and Bates; Addison-Wesley, 1962. Dec., 557-58.
- TINNAPPEL, HAROLD. Reviews and evaluations. Oct., 413-14; Dec., 556-59.
- TREMBLAY, CLIFFORD W. Review of *Modern Mathematics for the Junior High School*, TEMAC Programmed Learning Materials, Smith; Encyclopaedia Britannica, 1963. May, 341-42.
- TRIMBLE, HAROLD C. Review of *The Teaching of Mathematics*, Dubisch; John Wiley, 1963. Mar., 172-73.
- WALENDER, ARNOLD L. A trigonometric recapitulation. Apr., 257-58.
- WASSERSTROM, MARLENE A. Review of *What Are the Chances?* Moskowitz; Macmillan, 1963. May, 347.
- WERNICK, WILLIAM. A list of standard corrections. Feb., 107.
- WHITMAN, NANCY C. Review of *Probability and Statistics for Everyman*, Adler; John Day, 1963. May, 344.
- WILLIAMS, HORACE E. A demonstration of indeterminate forms using finite methods. Dec., 537-38.
- WILLIE, MARY M. Review of *Growth in Arithmetic—Discovery Edition, Mathematics Enrichment, Book D*, Mueller and Hach; Harcourt, Brace & World, 1963. May, 340.
- WILSON, RAYMOND H., JR. The importance of mathematics in the Space Age. May, 290-97.
- WOLFE, MARTIN S. Review of *Arithmetic of Directed Numbers and Introduction to Sets*, Nichols, Kalin, and Garland; Holt, Rinehart & Winston, 1962. Dec., 556-57.

## Title index

- An analysis of elementary functions for high school students. SISTER TERESA MARIE, O.S.F. May, 307-09.
- Annual high school mathematics contest. C. T. SALKIND. Feb., 75-78.
- Approximating an angle division by a sequence of bisections. LYLE E. PURSELL. Dec., 529-32.
- A bibliography on the changing curriculum in secondary school mathematics. CAROL V. McCAMMAN and JANE M. HILL. Mar., 154-59.
- A Christmas graph. JOHN D. HOLCOMB. Dec., 560-61.
- Classified index, Volume LVII, 1964, 571-79.
- A comment on Professor Charles L. Smith's paper "On the origin of '>' and '<'." HOWARD EVES. Nov., 481.
- Committees and representatives (1964-65). Nov., 487-90.
- A comparative study of methods of teaching plane geometry. JAMES L. JORDY. Nov., 472-78.
- Coordinate geometry with an affine approach. HARRY SITOMER. Oct., 404-05.
- The Council's drive to improve school mathematics—a progress report. FRANK B. ALLEN. Oct., 370-78.



- Current reforms in the mathematics curricula—a passing phase or progress? W. EUGENE FERGUSON. Mar., 143-48.
- The dawn of demonstrative geometry. NATHAN ALTSHILLER-COURT. Mar., 163-66.
- Designing RAPID, an analogue computer. THOMAS H. SLOOK. Mar., 149-51.
- A demonstration of indeterminate forms using finite methods. HORACE E. WILLIAMS. Dec., 537-38.
- A dialogue on two triangles. LEANDER W. SMITH. Apr., 233-34.
- Discovering the centroid of a quadrilateral by construction. SAMUEL KANER. Nov., 484-85.
- Discovery of patterns in the difference of two squares. JOE K. SMITH. May, 351-54.
- Discovery of basic inversion theory by construction. RICHARD V. SPENCER. May, 303-06.
- Dr. Hopkins' proof of the angle bisector problem. SISTER MARY CONSTANTIA. Dec., 539-41.
- The equivalence of a given collection of statements. DANIEL E. DUPREE. Apr., 240-41.
- The evolution of group theory. G. H. MILLER. Jan., 26-30.
- An example of student-generated sequence in mathematics instruction. JEROME D. KAPLAN. May, 298-302.
- An experiment with programmed instruction as a supplement to teaching college mathematics by closed-circuit television. BENNIE R. LANE. Oct., 395-97.
- An experiment in programmed instruction in junior high school. PAUL H. RANDOLPH. Mar., 160-62.
- An experiment with low achievers in arithmetic. KENNETH E. EASTERDAY. Nov., 462-68.
- An experiment in the teaching of college algebra. ROY A. DOBYNS. Feb., 86-88.
- Experimental programs. EUGENE D. NICHOLS. *Editor*. Jan., 20-25; Feb., 86-88; Mar., 160-62; Oct., 404-05; Nov., 472-78; Dec., 546-51.
- Facilities for secondary school mathematics. J. S. FRAME. Oct., 379-91.
- Finding rational roots by modular methods. DANIEL B. LLOYD. Feb., 79-81.
- A fitting tribute. IRVIN H. BRUNE. Nov., 482-83.
- The Forty-third Annual Meeting of the NCTM, April 21-24, 1965, Detroit, Michigan. Dec., 569.
- From algebra to geometry in four easy lessons. MARTHA C. CONDIT. Jan., 40-41.
- Geometric diversions: a 25-point geometry. ARTHUR F. COXFORD, JR. Dec., 561-64.
- Geometric intuition and  $\sqrt{ab} \leq (a+b)/2$ . EDWARD M. HARRIS. Feb., 84-85.
- Graphical interpretation of the limit of an indeterminate function. ADRIAN BAYLOCK. Feb., 104-05.
- The greatest integer function. HAROLD J. SHURLOW. Apr., 226-27.
- Have You Read? PHILIP PEAK. *Editor*. Jan., 15, 25; Feb., 78; Mar., 168; Apr., 211, 232; May, 354; Nov., 456; Dec., 541.
- Historically speaking.—HOWARD EVES. *Editor*. Jan., 26-32; Feb., 89-97; Mar., 163-68; Apr., 242-53; May, 323-32; Oct., 406-10; Nov., 479-81; Dec., 552-55.
- History of group theory leading to the development of infinite abelian groups. BARRY LITVAK. Jan., 30-32.
- How modern is modern mathematics? WILLIAM L. SCHAAF. Feb., 89-97.
- The importance of mathematics in the Space Age. RAYMOND H. WILSON, JR. May, 290-97.
- An impromptu discovery lesson in algebra. HENRY D. SNYDER. Oct., 415-16.
- Introduction to non-Euclidean geometry. WESLEY W. MAIERS. Nov., 457-61.
- Irrationals, area, and probability. DONALD E. MYERS. Apr., 203-07.
- An iterative application for elementary algebra. LOWELL LEAKE, JR. Jan., 12-15.
- Iteration solution methods. P. H. NYGAARD. Jan., 8-11.
- Iterative methods in high school algebra. ALLEN R. HESSE. Jan., 16-19.
- Joint meeting of the NCTM with the AAAS. Nov., 492.
- Joint meeting with the MAA. Dec., 567.
- The Kensington stone mystery. D. J. STRUIK. Mar., 166-68.
- Leave the door open! JULIA ADKINS. Nov., 485-86.
- Letters to the editor. Feb., 109; Apr., 202, 207, 241; May, 332; Oct., 378; Nov., 483; Dec., 536.
- The limit concept in the SMSG revised sample textbooks. DONALD W. HIGHT. Apr., 194-99.
- Linear indeterminate problems. JAMES D. FOGO. Apr., 223-25.
- The link method in trigonometry. RAOUL HAILPERN. Nov., 469-71.
- A list of standard corrections. WILLIAM WERNICK. Feb., 107.
- The logic of absolute value inequalities. MARVIN L. CHACHERE. Feb., 73-74.
- A look at discovery. JAMES BOLDING. Feb., 105-06.
- Mathematics and computing in high school: a betrothal. ALEXANDRA FORSYTHE. Jan., 2-7.
- Mathematics in the community junior college. LOREN W. PIXLEY. May, 313-16.
- Membership report. JAMES D. GATES. Nov., 493.
- Minutes of the Annual Business Meeting. HOUSTON T. KARNES. Oct., 417-21.
- Motivation and general mathematics students. BOYD HOLTAN. Jan., 20-25.
- Myth, the Muse, and mathesis. CARL B. BOYER. Apr., 242-53.
- NCTM projects and panels. Nov., 490.
- NCTM Affiliated Group Officers and Editors. Apr., 260-68.
- NCTM representatives. May, 355-59.
- A new look at enrichment. SISTER ANTONE MALERICH, O.S.B. May, 349-51.
- The New York fragments of the Rhind Mathematical Papyrus. LAURA GUGGENBUHL. Oct., 406-10.
- The 1964-65 budget. HOUSTON T. KARNES. Oct., 423.
- On numbers and numerals. ROBERT C. MCLEAN. Mar., 174-75.



- On the origin of ">" and "<". CHARLES L. SMITH. Nov., 479-81.
- On solutions of geometrical constructions utilizing the compasses alone. JERRY P. BECKER. Oct., 398-403.
- Pascal's triangle and powers of 11. ROBERT L. MORTON. Oct., 392-94.
- Permutations from a different point of view. JOSEPH J. COMFORT. Mar., 152-53.
- Playing with a function. A. N. TUCKER. Feb., 97.
- Points and viewpoints. Mar., 174-75; May, 333-34; Oct. 411-12; Nov., 482-83.
- Projectiles. DONALD W. STOVER. May, 317-22.
- Proceedings of the Fifteenth Annual Delegate Assembly. Dec., 565-67.
- A property of the discriminant. VINNIE H. MILLER. Feb., 82-83.
- A proposed amendment to the bylaws. Mar., 176.
- Pythagorean mathematics in the modern classroom. ALBERT P. SHULTE. Apr., 228-32.
- A queueing simulation. RICHARD H. GRAMANN. Feb., 66-72.
- Reflections of a retiring teacher of mathematics. HAROLD P. FAWCETT. Nov., 450-56.
- Registrations at Minneapolis Meeting, August 20-21, 1964. Dec., 568.
- Registration at NCTM Conventions. Nov., 491-92.
- Repeating decimals and tests for divisibility. JACK M. ELKIN. Apr., 215-18.
- Report of Nominating Committee. Jan., 42-48.
- Reviews and evaluations. KENNETH B. HENDERSON. *Editor*. Jan., 33-34; Feb., 98-103; Mar., 169-73; Apr., 254-56; May, 335-48.
- Reviews and evaluations. HAROLD TINNAPPEL. *Editor*. Oct., 413-14; Dec., 556-59.
- The role and nature of mathematics. PRESTON C. HAMMER. Dec., 514-21.
- The role of geometry in the eleventh and twelfth grades. HARRY LEVY. Mar., 130-38.
- Saccheri, forerunner of non-Euclidean geometry. SISTER MARY OF MERCY FITZPATRICK. May, 323-32.
- Science for a day. BARNARD H. BISSINGER. Dec. 546-51.
- Seven good years. IRVIN H. BRUNE. Oct., 411-12.
- Snowflake curves. BRUCE W. KING. Apr., 219-22.
- Some axioms for teaching real exponents. C. E. FALBO. Apr., 212-14.
- Some remarks concerning families of circles and radical axes. JAMES A. BRADLEY. Dec., 533-36.
- Structuring a proof. DONN L. KLINGLER. Apr., 200-02.
- Spinning out the square root of an integer. N. A. DRAIM. Dec., 542-45.
- Sums equals product. FATHER VICTOR FESER, O.S.B. May, 310-12.
- A survey concerning advanced mathematics curriculum. WILLIAM R. BLANK. Apr., 208-11.
- Thanks. ROBERT E. PINGRY. May, 333-34.
- Tips for beginners. WILLIAM C. LOWRY and JOSEPH N. PAYNE. *Editors*. Jan., 35-41; Feb., 104-07; Apr., 257-59; May, 349-54.
- Tips for beginners. JOSEPH N. PAYNE. *Editor*. Oct., 415-16; Nov., 484-85; Dec., 560-61.
- A trigonometric recapitulation. ARNOLD L. WALLENDER. Apr., 257-58.
- Two decades of mathematical education in Puerto Rico. MARIANO GARCÍA. Apr., 235-39.
- Two new professional journals. Jan., 19.
- A unit in high school geometry without the textbook. PAUL W. AVERS. Mar., 139-42.
- Using historical stories to stimulate interest in mathematics. HENRY HARMELING, JR. Apr., 258-59.
- The volume of a truncated pyramid in ancient Egyptian papyri. R. J. GILLINGS. Dec., 552-55.
- What's new in teaching slow learners in junior high school? SARAH GREENHOLZ. Dec., 522-28.
- What to do in a mathematics club. DOLORES GRANITO. Jan., 35-39.
- What's new? Jan., 11; Feb., 72; Mar., 142; Apr., 234; May, 322; Nov., 471; Dec., 528.
- Your professional dates. Jan., 48-49; Feb., 108-09; Mar., 176-78; Apr., 269-70; May, 360; Oct., 424; Nov., 494; Dec., 570.

## Subject index

### ABILITY GROUPING

What's new in teaching slow learners in junior high school? 522-28.

#### Miscellaneous

The evolution of group theory, 26-30.

Finding rational roots by modular methods, 79-81.

Geometric intuition and  $\sqrt{ab} \leq (a+b)/2$ , 84-85.

History of group theory leading to the development of infinite abelian groups, 30-32.

Iteration solution methods, 8-11.

An iterative application for elementary algebra, 12-15.

Iterative methods in high school algebra, 16-19.

The logic of absolute value inequalities, 73-74.

Playing with a function, 97.

A property of the discriminant, 82-83.

### ALGEBRA

#### Teaching methods

An experiment in the teaching of college algebra, 86-88.

From algebra to geometry in four easy lessons, 40-41.

Letters to the editors, 378.

Some axioms for teaching real exponents, 212-14.

#### Topics in

The greatest integer function, 226-27.

Linear indeterminate problems, 223-25.

Pascal's triangle and powers of 11, 392-94.



- Permutations from a different point of view, 152-53.
- APPLICATIONS**
- Miscellaneous
- Mathematics and computing in high school: a betrothal, 2-7.
- A queueing simulation, 66-72.
- Science for a day, 546-51.
- Science and engineering
- Designing RAPID, an analogue computer, 149-51.
- ARTICULATION**
- The limit concept in the SMSG revised sample textbooks, 194-99.
- Science for a day, 546-51.
- Snowflake curves, 219-22.
- ARITHMETIC**
- Teaching methods
- An experiment with low achievers in arithmetic, 462-68.
- Topics in
- Pascal's triangle and powers of 11, 392-94.
- Repeating decimals and tests for divisibility, 215-18.
- Spinning out the square root of an integer, 542-45.
- CALCULATORS AND COMPUTERS**
- A demonstration of indeterminate forms using finite methods, 537-38.
- Designing RAPID, an analogue computer, 149-51.
- Iteration solution methods, 8-11.
- An iterative application for elementary algebra, 12-15.
- Iterative methods in high school algebra, 16-19.
- Mathematics and computing in high school: a betrothal, 2-7.
- CALCULUS**
- Miscellaneous
- Graphical interpretation of the limit of an indeterminate function, 104-05.
- Teaching methods
- A demonstration of indeterminate forms using finite methods, 537-38.
- The limit concept in the SMSG revised sample textbooks, 194-99.
- CLUBS, MATHEMATICS**
- What to do in a mathematics club, 35-39.
- CURRICULUM**
- High school
- Coordinate geometry with an affine approach, 404-05.
- Permutations from a different point of view, 152-53.
- The role of geometry in the eleventh and twelfth grades, 130-38.
- A survey concerning advanced mathematics curriculum, 208-11.
- Junior high school
- An experiment in programmed instruction in junior high school, 160-62.
- An experiment with low achievers in arithmetic, 462-68.
- Miscellaneous
- A bibliography on the changing curriculum in secondary school mathematics, 154-59.
- Current reforms in the mathematics curricula—a passing phase or progress? 143-48.
- How modern is modern mathematics? 89-97.
- Mathematics and computing in high school: a betrothal, 2-7.
- Two decades of mathematical education in Puerto Rico, 235-39.
- DEVICES**
- Designing RAPID, an analogue computer, 149-51.
- Evaluation of *Constructions in Geometry*, La Nuova Italia, 413.
- Evaluation of *Wff'n Proof, The Game of Modern Logic*, Allen, 346-47.
- see also VISUAL AIDS
- EVALUATION**
- Annual high school mathematics contest, 75-78.
- GENERAL MATHEMATICS**
- Teaching methods
- Motivation and general mathematics students, 20-25.
- GEOMETRY**
- Curriculum
- The role of geometry in the eleventh and twelfth grades, 130-38.
- Miscellaneous
- The dawn of demonstrative geometry, 163-66.
- Geometric intuition and  $\sqrt{ab} \leq (a+b)/2$ , 84-85.
- A property of the discriminant, 82-83.
- Pythagorean mathematics in the modern classroom, 228-32.
- Snowflake curves, 219-22.
- Teaching methods
- A comparative study of methods of teaching plane geometry, 472-78.
- Discovering the centroid of a quadrilateral by construction, 484.
- From algebra to geometry in four easy lessons, 40-41.
- A list of standard corrections, 107.
- Structuring a proof, 200-02.
- A unit in high school geometry without the textbook, 139-42.
- Topics in
- Approximating an angle division by a sequence of bisections, 529-32.
- A Christmas graph, 560-61.
- Coordinate geometry with an affine approach, 404-05.
- A dialogue on two triangles, 233-34.
- Dr. Hopkins' proof of the angle bisector problem, 539-41.
- Geometric diversions: a 25-point geometry, 561-64.
- Introduction to non-Euclidean geometry, 457-61.
- On solutions of geometrical constructions utilizing the compasses alone, 398-403.
- Some remarks concerning families of circles and radical axes, 533-36.
- The volume of a truncated pyramid in ancient Egyptian papyri, 552-55.



## GRAPHS AND GRAPHING

Geometric intuition and  $\sqrt{ab} \leq (a+b)/2$ , 84-85.

Graphical interpretation of the limit of an indeterminate function, 104-05.

The greatest integer function, 226-27.

Some remarks concerning families of circles and radical axes, 533-36.

## HISTORY OF MATHEMATICS

### Miscellaneous

A comment on Professor Charles L. Smith's paper "On the origin of '>' and '<'," 481.

The evolution of group theory, 26-30.

Historically speaking, 26-32, 89-97, 163-68, 242-53, 323-32, 406-10, 479-81, 552-55.

History of group theory leading to the development of infinite abelian groups, 30-32.

How modern is modern mathematics? 89-97.

The Kensington stone mystery, 166-68.

Myth, the muse, and mathesis, 242-53.

The New York fragments of the Rhind Mathematical Papyrus, 406-10.

On the origin of ">" and "<," 479-81.

Using historical stories to stimulate interest in mathematics, 258-59.

### Topics in

The dawn of demonstrative geometry, 163-66.

Pythagorean mathematics in the modern classroom, 228-32.

The volume of a truncated pyramid in ancient Egyptian papyri, 552-55.

## INDUCTION, MATHEMATICAL

The equivalence of a given collection of statements, 240-41.

## LANGUAGE OF MATHEMATICS

How modern is modern mathematics? 89-97.

On numbers and numerals, 174-75.

Pascal's triangle and powers of 11, 392-94.

## LIMITS

A demonstration of indeterminate forms using finite methods, 537-38.

Graphical interpretation of the limit of an indeterminate function, 104-05.

The limit concept in the MSG revised sample textbooks, 194-99.

## LITERATURE

### Miscellaneous

A bibliography on the changing curriculum in secondary school mathematics, 154-59.

Have you read? 15, 25, 78, 168, 211, 232, 354, 456, 541.

The Kensington stone mystery, 166-68.

Two new professional journals, 19

What's new? 11, 72, 142, 234, 322, 471, 528.

Reviews and evaluations, 33-34, 98-103, 169-73, 254-56, 335-48, 413-14, 556-59.

## LOGIC

Dr. Hopkins' proof of the angle bisector problem, 539-41.

The equivalence of a given collection of statements, 240-41.

The logic of absolute value inequalities, 73-74.

The role and nature of mathematics, 514-21.

## MATHEMATICS, GENERAL

### Cultural values of

How modern is modern mathematics? 89-97.

Reflections of a retiring teacher of mathematics, 450-56.

The role and nature of mathematics, 514-21.

### Education

Annual high school mathematics contest, 75-78.

Current reforms in the mathematics curricula—a passing phase or progress? 143-48.

Mathematics in the community junior college, 313-16.

## NCTM

### Bylaws

A proposed amendment to the bylaws, 176.

### Committee Reports

Annual Financial Report, 421.

The 1964-65 budget, 423.

Report of the Nominating Committee, 42.

### Meetings

The Forty-third Annual Meeting of the NCTM, 569.

Joint meeting of the NCTM with the AAAS, 492.

Joint meeting with the MAA, 567.

### Minutes

Minutes of Annual Business Meeting, 417.

### Miscellaneous

The Council's drive to improve school mathematics—a progress report, 370-78.

Membership report, 493.

NCTM projects and panels, 490.

Registration at NCTM conventions, 491.

Your Professional Dates, 48-49, 108-09, 176-78, 269-70, 360, 424, 494, 568.

### Officers

Committees and representatives, 487-89.

NCTM affiliated group officers and editors, 260-68.

NCTM representatives, 355-59.

## NUMBERS AND NUMBER SYSTEMS, THEORY

Pythagorean mathematics in the modern classroom, 228-32.

Repeating decimals and tests for divisibility, 215-18.

Spinning out the square root of an integer, 542-45.

## OPINIONS AND PHILOSOPHIES

Leave the door open! 485.

Reflections of a retiring teacher of mathematics, 450-56.

The role and nature of mathematics, 514-21.

### Points and viewpoints

Current reforms in the mathematics curricula—a passing phase or progress? 143-48.

A fitting tribute, 482-83.

On numbers and numerals, 174-75.



- Points and viewpoints, 174-75, 333-34, 411-12, 482-83.
- PROBABILITY**  
Irrationals, area, and probability, 203-07.  
A queueing simulation, 66-72.
- PROBLEM SOLVING**  
Finding rational roots by modular methods, 79-81.
- PSYCHOLOGY**  
What's new in teaching slow learners in junior high school? 522-28.
- RECREATIONAL MATHEMATICS**  
A Christmas graph, 560-61.  
Geometric diversions: a 25-point geometry, 561-64.  
Linear indeterminate problems, 223-25.  
Playing with a function, 97.  
Spinning out the square root of an integer, 542-45.  
What to do in a mathematics club, 35-39.
- RESEARCH**  
**Education**  
A survey concerning advanced mathematics curriculum, 208-11.  
An experiment with programmed instruction as a supplement to teaching college mathematics by closed-circuit television, 395-97.  
An experiment with low achievers in arithmetic, 462-68.  
Experimental programs, 546-51.  
Motivation and general mathematics students, 20-25.  
**Miscellaneous**  
A comparative study of methods of teaching plane geometry, 472-78.  
Coordinate geometry with an affine approach, 404-05.  
An experiment in programmed instruction in junior high school, 160-62.  
An experiment in the teaching of college algebra, 86-88.  
Experimental programs, 20-25, 86-88, 160-62, 404-05, 472-78, 546-51.
- SYMBOLISM**  
A comment on Professor Charles L. Smith's paper "On the origin of ' $>$ ' and ' $<$ ,'" 481.  
On the origin of " $>$ " and " $<$ ", 479-81.  
Structuring a proof, 200-02.
- TEACHER**  
**Miscellaneous**  
Reflections of a retiring teacher of mathematics, 450-56.
- TEACHING METHODS**  
**Discovery**  
A look at discovery, 105-06.
- Miscellaneous**  
Discovering the centroid of a quadrilateral by construction, 484.  
Facilities for secondary school mathematics, 379-91.  
From algebra to geometry in four easy lessons, 40-41.  
Graphical interpretation of the limit of an indeterminate function, 104-05.  
An impromptu discovery lesson in algebra, 415-16.  
Leave the door open! 485.  
A list of standard corrections, 107.  
Motivation and general mathematics students, 20-25.  
The role of geometry in the eleventh and twelfth grades, 130-38.  
Science for a day, 546-51.  
Some axioms for teaching real exponents, 212-14.  
Tips for beginners, 35-41, 104-07, 257-59, 349-54, 415-16, 484-85, 560-61.  
A unit in high school geometry without the textbook, 139-42.  
Using historical stories to stimulate interest in mathematics, 258-59.  
What's new in teaching slow learners in junior high school? 522-28.
- Programmed instruction**  
A comparative study of methods of teaching plane geometry, 472-78.  
An experiment in programmed instruction in junior high school, 160-62.  
An experiment in the teaching of college algebra, 86-88.  
An experiment with programmed instruction as a supplement to teaching college mathematics by closed-circuit television, 395-97.
- TELEVISION**  
An experiment with programmed instruction as a supplement to teaching college mathematics by closed-circuit television, 395-97.
- TESTS**  
Annual high school mathematics contest, 75-78.
- TRIGONOMETRY**  
The link method in trigonometry, 469-71.  
Playing with a function, 97.  
A trigonometric recapitulation, 257-58.
- VISUAL AIDS**  
Facilities for secondary school mathematics, 379-91.