

THE MATHEMATICS TEACHER

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



CLASSIFIED INDEX

VOLUME XLVI

1953

EDITORIAL OFFICE

Henry Van Engen, Iowa State Teachers College, Cedar Falls, Iowa

ARTICLES BY AUTHORS

- ABERNETHY, JOHN R. General Education Values of Mathematics and the Attempt of a Faculty to Teach Them. Apr., 241-45, 259.
- ADLER, RUTH, and PETERS, MAX. General Mathematics and the Core Curriculum. Mar., 171-77.
- ALLEN, FRANK B. Functional Thinking; Computing the Size of a Room; Application of Parallelogram Law. Nov., 512-14.
- ANDERSON, SIGFRID E. A Simple Device for Illustrating the Size of a Cubic Yard. Dec., 578-79.
- ANNING, NORMAN. A Method of Exhibiting the Theorem of Pappus in the Classroom. Jan., 50.
- ANNING, NORMAN. On Cyclic Sets of Digits. Dec., 586-87.
- AUERBACH, MAMIE L. The Students of Senior Arithmetic Class Talk it Over. Mar., 197-98.
- BAKST, AARON. Editor, Mathematical Recreations. 55, 90, 185.
- BAKST, AARON. Editor, Mathematical Recreations, Divisibility and Transposed Digits. 90.
- BAKST, AARON. Editor, Mathematical Recreations, Non-Decimal Systems. 185.
- BAKST, AARON. Editor, Mathematical Recreations, Systems of Numeration. 55.
- BAKST, AARON. Hyperbolic Functions. Feb., 71-77.
- BENNETT, HOWARD C. A Graphical Method Useful in Solving Certain Algebraic and Trigonometric Inequalities. Feb., 82-85.
- BERGER, EMIL J. Editor, Devices for a Mathematics Laboratory. 50, 86, 210, 274, 338, 427, 504, 578.
- BOYD, J. R. A Mathematics Club for the Able. Jan., 43-45.
- BRANDES, LOUIS GRANT. Using Recreational Mathematics Materials in the Classroom. May, 326-29, 336.
- BROWN, ELIZABETH F. More About Big Numbers. Apr., 265.
- BROWN, JOHN A. Editor, What Is Going On in Your School? 42, 103, 195, 292, 359, 434, 509, 582.
- BROWN, JULIAN H. Correcting a Big Error. Apr., 273.
- BROWN, KENNETH E. Editor, Research in Mathematics Education. 594.
- BROWN, KENNETH E. Editor, What Research Has There Been in Mathematics Education in 1952? Dec., 594.
- CARLTON, CARL J. Mathematics in the Skilled Trades. Jan., 8-13, 27.
- CARNAHAN, WALTER H. Pi and Probability. Feb., 65-66, 70.
- CELL, JOHN W. The Principle of Linearity—Theory and Application. Dec., 548-50.
- CHENEY, WM. FITCH, JR. Can We Outdo Mascheroni? Mar., 152-56.
- CHIPMAN, HOPE. A Mathematics Quiz Program. Dec., 537-40.
- CLIFFORD, PAUL C. Editor, Mathematical Miscellanea. 432, 507, 586.
- CURRY, MURIEL G. "M" Day in Gilmer County. Apr., 294-95.
- DASSAU, DORIS. Algebra. Nov., 483.
- DAVIS, MARJORIE. A Workbook for Mathematics III. Oct., 434-35.
- DODES, IRVING ALLEN. The Science of Teaching Mathematics. Mar., 157-66.
- DONALD, SISTER MARY, I.H.M. An Angle Device. Oct., 429-30.
- THE EDUCATION COMMITTEE OF THE INDUSTRIAL MATHEMATICS SOCIETY, Detroit, Michigan. The Increasing Importance of Mathematics. Jan., 3-7.
- ELIAS, ROBERT. Mathematics at Work in the Paper Industry. Dec., 529-36.
- FAULKNER, E. J. Insurance Looks Ahead. May, 307-10.
- FEHR, HOWARD F. General Ways to Identify Students with Scientific and Mathematical Potential. Apr., 230-34.
- FUGILL, A. P., HULSWIT, W. H., and WINDER, C. V. The Need for Mathematics in Business and Industry (A Panel Discussion). Jan., 23-27.
- GOERZ, LYDIA R. An Experiment with Students Failing in General Mathematics. May, 360.
- GOLDSMITH, NORMAN A. The Englishman's Mathematics as Seen in General Periodicals in the Eighteenth Century. Apr., 253-59.
- HALLEY, ROBERT R. The Trigonometry Class—First Assignment. Apr., 295-96.
- HARTUNG, MAURICE L. High School Algebra for Bright Students. May, 316-21, 325.
- HAWKINS, ESTHER L. A School Bank. May, 359.
- HAWTHORNE, FRANK. Making Models with Chalk Boxes. May, 338-39.
- HAZARD, W. J. More About Quadratics. Jan., 34-35.
- HELSTERN, CLAIRE. Experimental Work in Plane Geometry. Oct., 435-36.
- HEMENWAY, LELAND D. An Optical Method for Demonstrating Conic Sections. Oct., 428-29.
- HERR, R. MARGARET. A Learning Aids Set Made from Tin Strips. Dec., 579-80.
- HESS, ADRIEN L. Adjusting First-Year College Mathematics for Special Interest Groups. May, 360-63.
- HIRSCH, MARTIN. Inscribing in a Square. Feb., 107-8.
- HULSWIT, W. H. See FUGILL, A. P.
- IRVIN, LEE. The Organization of Instruction in Arithmetic and Basic Mathematics in Selected Secondary Schools. Apr., 235-40.
- JACKSON, HUMPHREY C. Activities Which Create Interest in a Mathematics Class. Oct., 436-37.
- JACOBSON, ARVID. The Emergence of Mathematical Needs in an Industrial Center. Jan., 1-2.
- JAMISON, H. F. Trisection. May, 342-44.
- JOHNSON, DONOVAN A. Editor, Aids to Teaching. 46, 118, 205, 378, 368, 444, 517, 598.
- JOHNSON, DONOVAN A. Let's Do Something for the Gifted in Mathematics. May, 322-25.

- JOHNSON, DONOVAN A. A Three Dimensional Graphing Device. May, 339-40, 345.
- JONES, PHILLIP S. Editor, Historically Speaking. 419, 500, 575.
- JONES, PHILLIP S. Editor, Historically Speaking, The Binary System. 575.
- JONES, PHILLIP S. Editor, Mathematical Miscellanea. 34, 107, 188, 265, 341.
- KACKLEY, GERALD. Mathematics at Hammond Technical Vocational High School. Feb., 104-5.
- KARNES, HOUSTON T. Editor, What Is Going on in Your School? 42, 103, 195, 292, 359, 434, 509, 582.
- KINSELLA, JOHN J. Editor, Research in Mathematics Education. 52, 218, 346.
- KINSELLA, JOHN. The Tangent Function Saves a Life. May, 376.
- KRUSE, WM. H. A New Solution to an Old Problem. Mar., 189-90.
- LAIRD, ROBERT A. The "1-2-3" Proposition. Feb., 109-10.
- LAWLER, MYRTLE. The Bulletin Board Demonstration. Feb., 103-4.
- LLOYD, DANIEL B. Ultra-Curricular Stimulation for the Superior Student. Nov., 487-89.
- MCCABE, PEG. Our Banking and Money System. Dec., 582-85.
- MCCLELLAND, HUGH H. Duplication of the Cube. Feb., 108-9.
- MANHEIMER, WALLACE. A Logical Symbolism for Proof in Elementary Geometry. Apr., 246-52.
- MASON, HAZEL L. Special Topics for Eighth Grade Arithmetic. Mar., 195-96.
- THE MATHEMATICS DEPARTMENT, Deering High School, Portland, Maine. Math Around Us. Apr., 260-61.
- MAUL, RAY C. Fewer Teachers to Meet Greater Demand. May, 305-6, 310.
- MAYOR, JOHN R. Editor, President's Page. 31, 93, 181, 262, 330, 418, 491, 568.
- MAYOR, JOHN R. Solid Analytic Geometry for Seniors. Feb., 105-6.
- MESERVE, BRUCE E. Topology for Secondary Schools. Nov., 465-74.
- MILLER, WILLIAM GILBERT. Tangent Circles and Conic Sections. Feb., 78-81.
- MILLS, C. N. More About Installment Loans. May, 365-67.
- MILLS, C. N. The Problem of Napoleon. May, 344-45.
- MOONAN, WILLIAM J. Statistical Training for Secondary Schools. Dec., 553-59.
- MOORE, ETHEL L. The Carpenter's Rule: An Aid in Teaching Geometry. Nov., 478.
- MYERS, SHELDON S. Editor, Applications. 38, 101, 193, 364.
- NOWLAN, F. S. The Solution of a Radical Equation. Nov., 490.
- OSTERBERG, JOHN. A Three Dimensional Graphing Device. May, 339-40, 345.
- O'ZEE, W. F. Rate, Base, and Percentage Device. Mar., 214-15.
- PARKER, JEAN (MRS.). Mathematics at Central High School, Florence, Alabama. Dec., 585-90.
- PEAK, PHILIP. Editor, Have You Read? 406, 477, 486, 490, 540, 547, 559, 581.
- PECK, LYMAN C. Tire Sizes; Pharmaceutical Arithmetic in the Home. Oct., 438-39, 447.
- PENNISI, LOUIS [L. Conditions under Which a Wrong Procedure Gives a Correct Answer! Feb., 101-11.
- PENNISI, LOUIS L. On the Nonexistence of Integral Roots. Dec., 587-88.
- PETERS, MAX. See ADLER, RUTH.
- RANUCCI, ERNEST R. Applications. Dec., 567.
- READ, CECIL B. Comments on Computation with Approximate Numbers. Nov., 479-82.
- READ, CECIL B. Editor, Book Section. 448, 522, 606.
- REES, MINA. Modern Mathematics and the Gifted Student. Oct., 401-6.
- REYNAUD, LURNICE. A Mathematics Exhibit. Mar., 196-97.
- RICHARDSON, E. T. Trisection! May, 344.
- RISDEN, GLADYS. What Is Wrong with School Arithmetic? Oct., 407-10.
- ROGERS, MARY C. Chairman, Officers of the NCTM Affiliated Groups, NCTM Affiliated Groups. 570.
- ROGERS, MARY C. Editor, The National Council Affiliated Groups. 32, 180, 414, 491, 570.
- ROSSKOPF, MYRON F. Professionalized Subject Matter for Junior High School Mathematics Teachers. Dec., 541-47.
- SANFORD, VERA. Editor, Notes on the History of Mathematics. 41, 348.
- SARAFYAN, DIRAN. Approximate Square Roots. Feb., 111-14.
- SCHAAF, WILLIAM L. Editor, References for Mathematics Teachers. 28, 115, 199, 270, 355, 440, 515, 591.
- SCHILLING, ROBERT. Mathematics in Engineering. Jan., 14-17, 22.
- SEELEY, WALTER J. The Engineer's Simple Arithmetic. Dec., 565-66.
- SHIELDS, JOHN. Trisection! May, 344.
- SIMPSON, T. M. On Asking Questions. Dec., 551-52.
- STEPHENSON, E. C. Mathematics in a Retail Business. Jan., 18-22.
- STIPANOWICH, JOSEPH. Editor, Book Section. 58, 124, 216, 286, 377.
- STONE, LUTHER. Trigonometric Functions Device. Feb., 86-88.
- STRUYK, ADRIAN. Editor, Mathematical Miscellanea. 432, 507, 588-90.
- STRUYK, ADRIAN. Loan Amortization. May, 366-67.
- STRUYK, ADRIAN. One Man's Big Numbers. Apr., 266-69.
- SUETZ, BEN A. Editor, Book Section. 448, 522, 606.
- SWALLOW, KENNETH. Cake Icing. Feb., 102.
- SYER, HENRY W. Editor, Aids to Teaching. 46, 118, 205, 278, 368, 444, 517, 598.
- THÉBAULT, VICTOR. A Third Note on the Pythagorean Theorem. Mar., 188-89.
- TIERNEY, JOHN A. Elementary Techniques in Maxima and Minima. Nov., 484-86.

- TRACHTENBERG, BERTRAN. The Method of Selection of Mathematics Textbooks in Newark, New Jersey. Nov., 509.
- ULLRICH, ANNA M. Report of the Investigation Concerning the Marking of Answers to Problems in Elementary School Arithmetic. Apr., 292-93.
- ULRICH, JAMES F. The Case for the Syllogism in Plane Geometry. May, 311-15, 325.
- VIAL, JOHN. Mathematics of the Aircraft Industry. Mar., 145-51.
- WARREN, HELEN. The Round Robin. Nov., 509-11, 520-21.
- WEIDEMANN, CHARLES C. Speed of Travel in Covered Wagon Days. Feb., 101-2.
- WEIDEMANN, CHARLES C. Steam Carriage to Automobile. May, 364-65.
- WENAAS, S. B. Exploratory Development of Mathematics Kits. Jan., 42-43.
- WICKHAM, J. J. A Suggestion for Duodecimals. Feb., 110.
- WILSON, JACK D. Arithmetic for Majors? Dec., 560-564.
- WILSON, JACK D. Trends in Geometry. Feb., 67-70.
- WILT, MAY L. A Unit on the History of Arithmetic. Nov., 475-77.
- WINDER, C. V. See FUGILL, A. P.
- WOLFLE, DAEL. Future Supply of Science and Mathematics Students. Apr., 225-29, 240.

ARTICLES BY TITLES

- Activities Which Create Interest in a Mathematics Class. HUMPHREY C. JACKSON. Oct., 436-37.
- Adjusting First-Year College Mathematics for Special Interest Groups. ADRIEN L. HESS. May, 360-63.
- Algebra. DORIS DASSAU. Nov., 483.
- An Angle Device. SISTER MARY DONALD, I.H.M. Oct., 429-30.
- Application of Parallelogram Law. FRANK B. ALLEN. Nov., 513-14.
- Applications. ERNEST R. RANUCCI. Dec., 567.
- Approximate Square Roots. DIRAN SARAFYAN. Feb., 111-14.
- Arithmetic for Majors? JACK D. WILSON. Dec., 560-564.
- The Bulletin Board Demonstration. Myrtle Lawler. Feb., 103-4.
- Cake Icing. KENNETH SWALLOW. Feb., 102.
- Can We Outdo Mascheroni? WM. FITCH CHENEY, JR. Mar., 152-56.
- The Carpenter's Rule: An Aid in Teaching Geometry. ETHEL L. MOORE. Nov., 478.
- The Case for the Syllogism in Plane Geometry. JAMES F. ULRICH. May, 311-15, 325.
- Comments on Computation with Approximate Numbers. CECIL B. READ. Nov., 479-82.
- Computing the Size of a Room. FRANK B. ALLEN. Nov., 513.
- Conditions under Which a Wrong Procedure Gives a Correct Answer! LOUIS L. PENNISI. Feb., 110-11.
- Correcting a Big Error. JULIAN H. BROWN. Apr., 273.
- Divisibility and Transposed Digits, Mathematical Recreations. Editor, AARON BAKST. 90.
- Duplication of the Cube. HUGH H. MCCLELLAND. Feb., 108-9.
- Elementary Techniques in Maxima and Minima. JOHN A. TIERNEY. Nov., 484-86.
- The Emergence of Mathematical Needs in an Industrial Center. ARVID W. JACOBSON. Jan., 1-2.
- The Engineer's Simple Arithmetic. WALTER J. SEELEY. Dec., 565-566.
- The Englishman's Mathematics as Seen in General Periodicals in the Eighteenth Century. NORMAN A. GOLDSMITH. Apr., 253-59.
- An Experiment with Students Failing in General Mathematics. LYDIA R. GOERZ. May 360.
- Experimental Work in Plane Geometry. CLAIRE HELSTERN. Oct., 435-36.
- Exploratory Development of Mathematics Kits. S. B. WENAAS. Jan., 42-43.
- Fewer Teachers to Meet Greater Demand. RAY C. MAUL. May, 305-6, 310.
- Functional Thinking. FRANK B. ALLEN. Nov., 512.
- Future Supply of Science and Mathematics Students. DAEL WOLFLE. Apr., 225-29, 240.
- General Education Values of Mathematics and the Attempt of a Faculty to Teach Them. JOHN R. ABERNETHY. Apr., 241-45, 259.
- General Mathematics and the Core Curriculum. RUTH ADLER and MAX PETERS. Mar., 171-77.
- General Ways to Identify Students with Scientific and Mathematical Potential. HOWARD F. FEHR. Apr., 230-34.
- A Graphical Method Useful in Solving Certain Algebraic and Trigonometric Inequalities. HOWARD C. BENNETT. Feb., 82-85.
- Have You Read? PHILIP PEAK. 406, 477, 486, 490, 540, 547, 559, 581.
- High School Algebra for Bright Students. MAURICE L. HARTUNG. May, 316-21, 325.
- Hyperbolic Functions. AARON BAKST. Feb., 71-77.
- The Increasing Importance of Mathematics. THE EDUCATION COMMITTEE. Jan., 3-7.
- Inscribing in a Square. MARTIN HIRSCH. Feb., 107-8.
- Insurance Looks Ahead. E. J. Faulkner. May, 307-10.
- A Learning Aids Set Made from Tin Strips. MARGARET R. HERR. Dec., 579-80.
- Let's Do Something for the Gifted in Mathematics. DONOVAN A. JOHNSON. May, 322-25.
- Loan Amortization. ADRIAN STRUYK. May, 366-67.
- A Logical Symbolism for Proof in Elementary

- Geometry. WALLACE MANHEIMER. Apr., 246-52.
- "M" Day in Gilmer County. MURIEL G. CURRY. Apr., 294-95.
- Making Models with Chalk Boxes. FRANK HAWTHORNE. May, 338-39.
- Math Around Us. Mathematics Department, Deering High School. Apr., 260-61.
- Mathematics at Central High School, Florence, Alabama. MRS. JEAN PARKER. Dec., 585-90.
- Mathematics at Hammond Technical Vocational High School. GERALD KACKLEY. Feb., 104-5.
- Mathematics at Work in the Paper Industry. ROBERT ELIAS. Dec., 529-36.
- A Mathematics Club for the Able. J. R. BOYD. Jan., 43-45.
- A Mathematics Exhibit. LURNICE REYNAUD. Mar., 196-97.
- Mathematics in Engineering. ROBERT SCHILLING. Jan., 14-17, 22.
- Mathematics in a Retail Business. E. C. STEPHENSON. Jan., 18-22.
- Mathematics in the Skilled Trades. CARL J. CARLTON. Jan., 8-13, 27.
- Mathematics of the Aircraft Industry. JOHN VIALI. Mar., 145-51.
- A Mathematics Quiz Program. HOPE CHIPMAN. Dec., 537-40.
- A Method of Exhibiting the Theorem of Pappus in the Classroom. NORMAN ANNING. Jan., 50.
- The Method of Selection of Mathematics Textbooks in Newark, New Jersey. BERTRAN TRACHTENBERG. Nov., 509.
- Modern Mathematics and the Gifted Student. MINA REES. Oct., 401-6.
- More About Big Numbers. ELIZABETH F. BROWN. Apr., 265.
- More About Installment Loans. C. N. MILLS. May, 365-67.
- More About Quadratics. W. J. HAZARD. Jan., 34-35.
- The Need for Mathematics in Business and Industry. A. P. FUGILL, W. H. HULSWIT, and C. V. WINDER. Jan., 23-27.
- A New Solution to an Old Problem. WM. H. KRUSE. Mar., 189-90.
- Non-Decimal Systems, Mathematical Recreations. Editor, AARON BAKST. 185.
- On Asking Questions. T. M. SIMPSON. Dec., 551-52.
- On Cyclic Sets of Digits. NORMAN ANNING. Dec., 586-87.
- On the Nonexistence of Integral Roots. LOUIS PENNISI. Dec., 587-88.
- One Man's Big Numbers. ADRIAN STRUYK. Apr., 266-69.
- The "1-2-3" Proposition. ROBERT A. LAIRD. Feb., 109-10.
- An Optical Method for Demonstrating Conic Sections. LELAND D. HEMENWAY. Oct., 428-29.
- The Organization of Instruction in Arithmetic and Basic Mathematics in Selected Secondary Schools. LEE IRVIN. Apr., 235-40.
- Our Banking and Money System. PEG MCCABE. Dec., 582-85.
- Pharmaceutical Arithmetic in the Home. LYMAN C. PECK. Oct., 439, 447.
- Pi and Probability. WALTER H. CARNAHAN. Feb., 65-66, 70.
- The Principle of Linearity—Theory and Application. JOHN W. CELL. Dec., 548-50.
- The Problem of Napoleon. C. N. MILLS. May, 344-45.
- Professionalized Subject Matter for Junior High School Mathematics Teachers. MYRON F. ROSSKOPF. Dec., 541-47.
- Questions Used in the 1952 Mathematics Contest of the Metropolitan New York Section of the Mathematical Association of America. Mar., 167-70.
- Rate, Base, and Percentage Device. W. F. O'ZEE. Mar., 214-15.
- Report of the Investigation Concerning the Marking of Answers to Problems in Elementary School Arithmetic. ANN M. ULLRICH. Apr., 292-93.
- Research in Mathematics Education. KENNETH E. BROWN. Dec., 594-97.
- The Round Robin. HELEN WARREN. Nov., 509-11, 520-21.
- A School Bank. ESTHER L. HAWKINS. May, 359.
- The Science of Teaching Mathematics. IRVING ALLEN DODES. Mar., 157-66.
- A Simple Device for Illustrating the Size of a Cubic Yard. SIGFRID E. ANDERSON. Dec., 578-79.
- Solid Analytic Geometry for Seniors. JOHN R. MAYOR. Feb., 105-6.
- The Solution of a Radical Equation. F. S. NOWLAN. Nov., 490.
- Special Topics for Eighth Grade Arithmetic. HAZEL L. MASON. Mar., 195-96.
- Speed of Travel in Covered Wagon Days. CHARLES C. WIEDEMANN. Feb., 101-2.
- Statistical Training for Secondary Schools. WILLIAM J. MOONAN. Dec., 553-59.
- Steam Carriage to Automobile. CHARLES C. WIEDEMANN. May, 364-65.
- The Students of Senior Arithmetic Class Talk It Over. MAMIE L. AUERBACH. Mar., 197-98.
- A Suggestion for Duodecimals. J. J. WICKHAM. Feb., 110.
- Systems of Numeration, Mathematical Recreations. Editor, AARON BAKST. 55.
- Tangent Circles and Conic Sections. WILLIAM GILBERT MILLER. Feb., 78-81.
- The Tangent Function Saves a Life. JOHN KINSELLA. May, 376.
- A Third Note on the Pythagorean Theorem. VICTOR THÉBAULT. Mar., 188-89.
- A Three Dimensional Graphing Device. DONOVAN A. JOHNSON. May, 339-40, 345.
- A Three Dimensional Graphing Device. JOHN OSTERBERG. May, 339-40, 345.
- Tire Sizes. LYMAN C. PECK. Oct., 438-39.
- Topology for Secondary Schools. BRUCE E. MESERVE. Nov., 465-74.
- Trends in Geometry. JACK D. WILSON. Feb., 67-70.
- Trigonometric Functions Device. LUTHER STONE. Feb., 86-88.

The Trigonometry Class—First Assignment.
ROBERT R. HALLEY. Apr., 295-96.
Trisection! H. F. JAMISON. May, 342-44.
Trisection! E. T. RICHARDSON. May, 344.
Trisection! JOHN SHIELDS. May, 344.
Ultra-Curricular Stimulation for the Superior
Student. DANIEL B. LLOYD. Nov., 487-89.
A Unit on the History of Arithmetic. MAY L.
WILT. Nov., 475-77.
Using Recreational Mathematics Materials in

the Classroom. LOUIS GRANT BRANDES. May,
326-29, 336.
What Is Wrong with School Arithmetic? GLADYS
RISDEN. Oct., 407-10.
What Research Has There Been in Mathe-
matics Education in 1952? Editor, KENNETH
E. BROWN. 594-97.
A Workbook for Mathematics III. MARJORIE
DAVIS. Oct., 434-35.
You Will Want to Send for This. 458.

ARTICLES BY TOPICS

Aids to Teaching (Editors, Henry W. Syer and
Donovan A. Johnson), 46, 118, 205, 278,
368, 444, 517, 598.

Booklets

Arithmetic in Action, 46.
Athletic Field and Court Diagrams, 369.
Aviation Education, 371.
Aviation Education Sources, 280.
A Bibliography of Curriculum Materials,
278.
Bibliography of Recent Air Age Education
Textbooks, 118.
Bibliography on Aviation for Guidance
Counsellors, 118.
Boeing Magazine, 368.
The Calendar for Everybody, 206.
Can I Be an Engineer? 372.
Children's Spending, 444.
Computations with Approximate Numbers,
369.
Consumer Credit Facts for You, 370.
Course of Study in Mathematics for Sec-
ondary Schools, 279.
Courses of Study in Office Machines and
Clerical Practice, 118.
The Day of Two Noons, 281.
Days for Dates, 444.
Developing Meaningful Practices in Arith-
metic, 517.
The Earth Is a Magnet, 369.
Education for the Talented in Mathe-
matics and Science, 598.
Electronic Analog Computer, 205.
Elmer's Gyros, 205.
The Evolution of the Calendar, 372.
Financial Security Topics for Teachers, 370.
Functional Mathematics in the Secondary
Schools, 279.
The Gyroscope through the Ages, 205.
How Much Government, 371.
Improve the Calendar, 206.
Informal Problems for Ninth Grade Math-
ematics, 598.
Information Regarding the Operation of
the New York Clearing House, 205.
Journal of Calendar Reform, 206.
Junior High School Mathematics, 278.
Machining Alcoa Aluminum, 280.
Mathematical Puzzles, 46.
Money: A Means of Exchange, 598.
Optics and Wheels, 205.
O.U. Mathematics Letter, 371.
The Pegasus, 368.

Precision, A Measure of Progress, 368.
Professional Opportunities in Mathematics,
371.
Scratch Pad Demonstration, 118.
The Secret of Flight, 369.
Senior High School Mathematics, 278.
Sets and Logic, 118.
Small Loan Laws of the United States, 370.
Teacher's Guide for Educator Monroe Add-
ing Calculator, 119.
The Teaching of Office Machines, 118.
Timekeeping Through the Ages (LC 600),
280.
Truck Walks on Wheels, 119.
Units and Systems of Weights and Meas-
ures, 280.
The World Calendar—Stability with Bal-
ance, 206.
You Will Like Geometry, 368.
Your Budget, 444.
Your Clothing Dollar, 444.
Your Food Dollar, 444.
Your Health Dollar, 444.
Your Home Furnishing Dollar, 444.
Your Mathematics Notebook, 369.
Your Recreation Dollar, 444.
Your Shelter Dollar, 444.
Your Shopping Dollar, 444.

Charts

How Families Buy Life Insurance, 373.
How High School Mathematics Can Con-
tribute to Your Career, 46.
Inventory by Airplane, 372.
One Square Yard, 47.
Table of Decimal Equivalents, 281.

Equipment

Addo, 600.
Arithmetic Dominoes, 373.
The Arithmetic Educator, 518.
Fraction Fun, 373.
Fracto-Blox, 119.
Grove—Yoder Abacus, 600.
Hit, 47.
Hundred Spool Number Board, 518.
IMOUT (Braille Edition), 47.
Judy Counting Meter, 373.
The Magic Teacher Puzzle-Plans, 281.
Mathematics Teacher File, 445.
Place Value Board, 517.
Pla-Pak, 282.
Primary Spool Number Board, 518.
Self-Teaching Flasher Arithmetic Games.
Set A: Addition-Subtraction, 444.

- Self-Teaching Flasher Arithmetic Games.
Set D: Division-Multiplication, 445.
"Wrico" Geometry Guide #01, 601.
- Films**
Banks and Credit, 282.
Bookkeeping and You, 209.
Borrowing in Subtraction, 47.
Decimals Are Easy, 283.
Geometry, 207.
Geometry in Action, 207.
Helping Children Discover Arithmetic, 208.
Let's Measure, 446.
Maps and Their Uses, 208.
Maps Are Fun, 119.
Meaning of Number Series: What Are Decimals? 518.
Meaning of Number Series: What Are Fractions? 519.
Orthographic Projection, 207.
Parallel Lines, 284.
Per cent in Everyday Life, 209.
Perspective Drawing, 206.
Pirro and the Scale, 48.
Sharing Economic Risk, 283.
Using the Bank, 519.
What Is Business? 282.
What Is a Contract?, 282.
What Is a Corporation?, 209.
What Time is It?, 209.
Work of the Stock Exchange, 283.
Your Family Budget, 208.
Your Thrift Habits, 283.
- Filmstrips**
Addition and Subtraction, 519.
Addition and Subtraction of Fractions, 519.
Area Measures, 120.
Five Keys to Mathematics, 519.
How Life Insurance Began, 374.
How Life Insurance Operates, 375.
How Life Insurance Policies Work, 375.
How to Tell Time: Part I: The Hour and Half-hour, 121; How to Tell Time: Part II: The Minutes, 121.
Light on Mathematics—Arithmetic, 519.
Linear Measures, 120.
Multiplication and Division, 519.
Multiplication and Division of Fractions, 519.
Orthographic Projection, 215.
Our Calendar, 120.
Our Number System, 120.
Planning Family Life Insurance, 375.
Square Root and Cube Root, 519.
A Study of Measurement, 122.
A Study of Measurement: Part I—Linear Measure; Part II—The Story of Measurement; Part III—Lines, Angles, Surface Measurement; Part IV—Area of Rectangles, Area of Parallelograms; Part VIII—Special Measurement—Board Feet (Lumber Measure) Right Triangle, 374.
Telling Time, 120.
The Transit: Part I—Description, Set-Up and Leveling; Part II—Verniers, 122.
Weight and Volume, 120.
- Instruments**
Map Projections Demonstrator, 447.
Number-ite, 375.
- Pictures**
Mathematical Designs, 49.
Mathematics in Nature, 48.
Portraits of Mathematicians, 49.
Visualized Curriculum Series, 284.
- Algebra**
Algebra, 483.
Elementary Techniques in Maxima and Minima, 484.
A Graphical Method Useful in Solving Certain Algebraic and Trigonometric Inequalities, 82.
High School Algebra for Bright Students, 316.
The Principle of Linearity—Theory and Application, 548.
The Solution of a Radical Equation, 490.
Amortization, Loan (Applications), 366.
Applications (Editor, Sheldon S. Myers), 38, 101, 193, 364, 438, 512, 567.
Analyzing and Computing the Per Cents of Moisture, Solids, and Fat in Butter, 194.
Application of Parallelogram Law, 513.
Cake Icing, 102.
Ceiling Tile, 567.
Computing the Size of a Room, 513.
Election Returns, 40.
Functional Thinking, 512.
Geometry Connected with Carpentry, 567.
Hanging Double Doors, 567.
The Healing or Cicatrization of Wounds, 193.
Jimmy Goes Big Game Hunting, a Short Story in Zoorithmetic, 38.
Loan Amortization, 366.
Mathematics of the Aircraft Industry, 145.
More About Installment Loans, 365.
Pharmaceutical Arithmetic in the Home, 439.
The Phillips Recessed Head Screw, 567.
Speed of Travel in Covered Wagon Days, 101.
Steam Carriage to Automobile, 364.
The Tangent Function Saves a Life, 376.
Tire Sizes, 438.
Use of the Growth Curve for Determining the Height of School Furniture, 364.
Approximate Numbers, Computations with (Booklet), 369.
- Arithmetic**
Arithmetic for Majors?, 560.
Comments on Computation with Approximate Numbers, 479.
The Engineer's Simple Arithmetic, 565.
Insurance Looks Ahead, 307.
Mathematics in a Retail Business, 18.
A Unit on the History of Arithmetic, 475.
What Is Wrong with School Arithmetic? 407.
Automobile, Steam Carriage to (Applications), 364.
- Aviation**
Bibliography for Guidance Counsellors, (Booklet), 118.
Bibliography of Recent Air Age Education Textbooks (Booklet), 118.
Inventory by Airplane (Chart), 372.
The Secret of Flight (Booklet), 369.

- The Binary System, Historically Speaking (Editor, Phillip S. Jones), 575.
- Book Section (Editors, Cecil B. Read and Ben A. Suelztz), 448, 522, 606.
- Book Section (Editor, Joseph Stipanowich), 58, 124, 216, 286, 377.
- Bright Students
- Future Supply of Science and Mathematics Students, 225.
 - General Ways to Identify Students with Scientific and Mathematical Potential, 230.
 - High School Algebra for Bright Students, 316.
 - Let's Do Something for the Gifted in Mathematics, 322.
 - Modern Mathematics and the Gifted Student, 401.
 - Ultra-Curricular Stimulation for the Superior Student, 487.
- Business
- Insurance Looks Ahead, 307.
 - Mathematics in a Retail Business, 18.
 - The Need for Mathematics in Business and Industry, 23.
- Calculator, Teacher's Guide for Educator Monroe Adding (Booklet), 119.
- Calendar, Evolution of the (Booklet), 372.
- Calendar for Everybody (Booklet), 206.
- Calendar, Improve the (Booklet), 206.
- Calendar, Journal of Reform (Booklet), 206.
- Calendar, World (Stability with Balance), (Booklet), 206.
- Citizenship
- General Education Values of Mathematics and the Attempt of a Faculty to Teach Them, 241.
- Classroom Materials
- Using Recreational Mathematics Materials in the Classroom, 326.
- Clearing House, Information Regarding the Operation of the New York (Booklet), 205.
- Contests
- Questions Used in the 1952 Mathematics Contest of the Metropolitan New York Section of the Mathematical Association of America, 167.
- Core Curriculum
- General Mathematics and the Core Curriculum, 171.
- Curriculum
- Bibliography of Materials (Booklet), 278.
 - Course of Study in Mathematics for Secondary Schools (Booklet), 279.
 - Courses of Study in Office Machines and Clerical Practice (Booklet), 118.
 - Functional Mathematics in the Secondary Schools (Booklet), 279.
 - General Education Values of Mathematics and the Attempt of a Faculty to Teach Them, 241.
 - General Mathematics and the Core Curriculum, 171.
 - Junior High School Mathematics (Booklet), 278.
 - Organization of Instruction in Arithmetic and Basic Mathematics in Selected Secondary Schools, 235.
 - Senior High School Mathematics, 278.
 - Trends in Geometry, 67.
 - Day of Two Noons (Booklet), 281.
 - Decimal Equivalents, Table of (Chart), 281.
 - Devices for a Mathematics Laboratory (Editor, Emil J. Berger), 50, 86, 210, 274, 338, 427, 504, 578.
 - An Angle Device, 429.
 - Another Makit Toy Model, 504.
 - Blackboard Locus Drawing Device, 88.
 - A Circle Device for Demonstrating Facts Which Relate to Inscribed Angles, 580.
 - Devices for Teaching Equation Solving, 427.
 - The Eight Octants, 213.
 - A Learning Aids Set Made from Tin Strips, 579.
 - Making Models with Chalk Boxes, 338.
 - Mechanical Device for Drawing the Sine Curve, 210.
 - A Method of Exhibiting the Theorem of Pappus in the Classroom, 50.
 - An Optical Method for Demonstrating Conic Sections, 428.
 - Probability Boards, 274.
 - A Problem from Solid Geometry, 505.
 - Rate, Base, and Percentage Device, 214.
 - A Simple Device for Illustrating the Size of a Cubic Yard, 578.
 - Skew Quadrilateral, 50.
 - Three Dimensional Graphing Device, 339.
 - Trigonometric Functions Device, 86.
- Editor's Note, 357.
- Engineering
- Mathematics in Engineering, 14.
- Enrichment of Mathematics Courses
- Hyperbolic Functions, 71.
 - Let's Do Something for the Gifted in Mathematics, 322.
 - Math Around Us, 260.
 - Pi and Probability, 65.
 - Tangent Circles and Conic Sections, 78.
 - Using Recreational Mathematics Materials in the Classroom, 326.
- General Electric Fellowships, 85.
- A General Motors Research Story, 45.
- Geometric Constructions
- Can We Outdo Mascheroni? 152.
 - Tangent Circles and Conic Sections, 78.
- Geometry
- Can We Outdo Mascheroni? 152.
 - The Carpenter's Rule: An Aid in Teaching Geometry, 478.
 - The Case for the Syllogism in Plane Geometry, 311.
 - Hyperbolic Functions, 71.
 - A Logical Symbolism for Proof in Elementary Geometry, 246.
 - Pi and Probability, 65.
 - Tangent Circles and Conic Sections, 78.
 - Trends in Geometry, 67.
 - Geometry, You Will Like (Booklet), 368.
 - Gifted Students. *See* Bright Students.
 - Government, How Much (Booklet), 371.
 - Growth Curve, Use of (Determining the Height of School Furniture) (Applications), 364.

Guidance

- Can I Be an Engineer? (Booklet), 372.
- How High School Mathematics Can Contribute to Your Career (Chart), 46.
- Professional Opportunities in Mathematics (Booklet), 371.
- You Will Like Geometry (Booklet), 368.
- Have You Read? (Editor, Philip Peak), 406, 477, 486, 490, 540, 547, 559, 581.
- Have You Seen? 89, 98, 184.
- Have Your Students Seen? 77, 166.
- Historically Speaking (Editor, Phillip S. Jones), 419, 500, 575.
- Angular Measure—Enough of Its History to Improve Its Teaching, 419.
- Bibliographia Historica—1, 500.
- The Binary System, 575.
- The Oldest American Slide Rule, 501.

History

- Englishman's Mathematics as Seen in General Periodicals in the Eighteenth Century, 253.
- A Unit on the History of Arithmetic, 475.
- History of Mathematics—Notes
- The A-Shaped Level, 41.
- Calendar, Two Postscripts on the, 41.
- Sebastien LeClerc's *Practical Geometry*, 348.
- Importance of Mathematics
- Fewer Teachers to Meet Greater Demand, 305.
- Future Supply of Science and Mathematics Students, 225.
- General Education Values of Mathematics and the Attempt of a Faculty to Teach Them, 241.
- Increasing Importance of Mathematics, 3.
- Insurance Looks Ahead, 307.
- Math Around Us, 260.
- Mathematics of the Aircraft Industry, 145.

Industry

- Emergence of Mathematical Needs in an Industrial Center, 1.
- Increasing Importance of Mathematics, 3.
- Mathematics at Work in the Paper Industry, 529-36.
- Mathematics in Engineering, 14.
- Mathematics in a Retail Business, 18.
- Mathematics in the Skilled Trades, 8.
- Mathematics of the Aircraft Industry, 145.
- Need for Mathematics in Business and Industry, 23.

Inequalities

- Graphical Method Useful in Solving Certain Algebraic and Trigonometric Inequalities, 82.

- Life Insurance, How Families Buy (Chart), 373.
- Loans, More About Installment (Applications), 365.

Logic

- Case for the Syllogism in Plane Geometry, 311.
- Logical Symbolism for Proof in Elementary Geometry, 246.
- Logic, Sets and (Booklet), 118.
- Magnet, The Earth Is a (Booklet), 369.
- Mathematical Miscellanea (Editor, Paul C.

Clifford), 432, 507.

Mathematical Miscellanea (Editor, Phillip S. Jones), 34, 107, 188, 265, 341.

Mathematical Miscellanea (Editor, Adrian Struyk), 432, 507, 586.

Norman Anning, On Cyclic Sets of Digits, 586.

Louis Pennisi, On the Nonexistence of Integral Roots, 587.

Mathematical Recreations (Editor, Aaron Bakst), 55, 90, 185.

Divisibility and Transposed Digits, 90.

Non-Decimal Systems, 185.

Systems of Numeration, 55.

Mathematics Institutes, 100, 114, 202, 252, 358.

Mathematics Tests, 123.

Measure—One Square Yard (Chart), 47.

Miscellaneous

Approximate Square Roots, 111.

Beware the Continued Radical, 433.

Conditions under Which a Wrong Procedure Gives a Correct Answer! 110.

Continued Fractions and "Rationalizing Numerators," 190.

Correcting a Big Error, 273.

Duplication of the Cube, 108.

Generating Certain Huge Pythagorean Triangles, 269.

Here We Go 'Round, 433.

Inscribing a Square in a Triangle, 107.

Lill's Method for Evaluating Polynomials, 35.

More About Big Numbers, 265.

More About Quadratics, 34.

A New Solution to an Old Problem, 189.

A Novel Linear Trisection, 524.

One Man's Big Numbers, 266.

"1-2-3" Proposition, 109.

Pentagon and Betsy Ross, 341.

Problem of Napoleon, 344.

Quadratic Equations and Continued Fractions, 192.

A Review Lesson on Logarithms, 433.

Suggestion for Duodecimals, 110.

Swale's Construction, 507.

A Third Note on the Pythagorean Theorem, 188.

Treasure Hunt, 432.

Trisection! 342.

National Council of Teachers of Mathematics, 7, 31, 32, 49, 93, 94, 99, 127, 151, 170, 177, 178, 180, 181, 182, 262, 297, 330, 333, 336, 337, 384, 386, 411, 413, 414, 417, 418, 431, 453, 495, 570.

The National Council Affiliated Groups (Editor, Mary C. Rogers), 32, 180, 414, 491, 570.

Affiliated Group Activities, Jackson B. Adkins, 384.

Affiliated Group Activities, Ida May Bernhard and Mary Lee Foster, 297.

Affiliated Group Activities, William A. Gager, 182.

Affiliated Group Activities, Donovan A. Johnson, 99.

Affiliated Groups—Fourth Delegate Assembly, Mary C. Rogers, 414.

- Annual Business Meeting, Leonore John, 411.
 Annual N.C.T.M. Summer Meeting with N.E.A.—Program, 337.
 Attendance Record of Summer Meeting with N.E.A., 7.
 Attendance Record—Thirteenth Christmas Meeting, 336.
 Attendance Record—Thirty-First Annual Meeting, 417.
 Fourth Delegate Assembly, Mary C. Rogers, 32.
 History of the Association of Teachers of Mathematics in New England, 1903–1953, William R. Ransom, 333.
 Membership Campaign and Membership Report, M. H. Ahrendt, 413.
 Membership Record, Mary C. Rogers, 180.
 Membership Report, M. H. Ahrendt, 177.
 (The) National Council Affiliated Groups, Mary C. Rogers, 495.
 Nominations for 1953 N.C.T.M. Ballot, Edith Woolsey, 94.
 Notice of Annual Business Meeting, M. H. Ahrendt, 151.
 Officers of the NCTM Affiliated Groups (Chairman, Mary C. Rogers), 570.
 President's Page, John R. Mayor, 31, 93, 181, 262, 330, 418, 491, 568.
 Program—Fourteenth Christmas Meeting, Marie S. Wilcox, 453.
 Program—Thirteenth Summer Meeting, 386.
 Program—Thirty-first Annual Meeting at Atlantic City, 127.
 Registrations at Annual Joint Meeting with the N.E.A., 474.
 Registrations for Twelfth Summer Meeting, 49.
 Research Award, 431.
 Schlauch, William S., 1873–1953, 170.
 Thirty-first Annual Meeting at Atlantic City, 178.
- New Publications**
The Arithmetic Teacher, 568.
The Mathematics Student, 568.
 News Notes, 57, 234, 298, 358, 418, 430, 503.
 1953 Metropolitan New York—MAA Mathematics Contest, 92.
 Notes on the History of Mathematics (Editor, Vera Sanford), 41, 348.
 Office Machines, Teaching of (Booklet), 118.
 Officers of the NCTM Affiliated Groups, NCTM Affiliated Groups (Chairman, Mary C. Rogers), 570.
- Plane Geometry**
 Can We Outdo Mascheroni? 157.
 Case for the Syllogism in Plane Geometry, 311.
 Logical Symbolism for Proof in Elementary Geometry, 246.
 Tangent Circles and Conic Sections, 78.
 Trends in Geometry, 67.
- Plays**
 Math Around Us, 260.
- Poems**
 Algebra, 483.
- Probability**
 Pi and Probability, 65.
- Proof**
 Logical Symbolism for Proof in Elementary Geometry, 246.
- Puzzles, Mathematical (Booklet)**, 46.
- Recreations (Editor, Aaron Bakst)**, 55, 90, 185.
 Using Recreational Mathematics Materials in the Classroom, 326.
- References for Mathematics Teachers (Editor, William L. Schaaf)**, 28, 115, 199, 270, 355, 440, 515, 591.
 Basic Theory and Principles, 441.
 College Mathematics, 270.
 General Discussion and Popular Treatment, 440.
 Just What Is Mathematics? 515.
 Measurement of Time, 115.
 The Miracle of Arithmetic, 591.
 Notes on Advanced Algebra, 199.
 Notes on Analytic Geometry, 28.
 Random Notes on Modern Geometry, 355.
- Research in Mathematics Education (Editor, Kenneth E. Brown)**, 594.
- Research in Mathematics Education (Editor, John J. Kinsella)**, 52, 218, 346.
- Criteria for Self-Evaluation of Programs of Student Teaching in Secondary School Mathematics (Ph.D. dissertation)**, T. E. Rine, 218.
- Elementary Mathematics in Arts Colleges (Ph.D. dissertation)**, Howard E. Wahlert, 52.
- The Understanding of Arithmetic Processes and Concepts Possessed by Teachers of Arithmetic**, Jacob S. Orleans, 346.
- What Research Has There Been in Mathematics Education in 1952?** 594.
- Skilled Trades**
 Mathematics in the Skilled Trades, 8.
- Statistics**
 Statistical Training for Secondary Schools, 553.
- Student Supply**
 Future Supply of Science and Mathematics Students, 225.
- Syllogism**
 The Case for the Syllogism in Plane Geometry, 311.
- Symbolism**
 A Logical Symbolism for Proof in Elementary Geometry, 246.
- Teacher Preparation**
 Professionalized Subject Matter for Junior High School Mathematics Teachers, 541.
- Teacher Supply**
 Fewer Teachers to Meet Greater Demand, 305.
- Teaching**
 The Carpenter's Rule: An Aid in Teaching Geometry, 478.
 General Education Values of Mathematics and the Attempt of a Faculty to Teach Them, 241.
 General Mathematics and the Core Curriculum, 171.
 On Asking Questions, 551.
 Science of Teaching Mathematics, 157.
 Trends in Geometry, 67.
 What Is Wrong with School Arithmetic? 407.

Tests

Davis Test of Functional Competence in Mathematics, David J. Davis, 123.

Topology

Topology for Secondary Schools, 465.

Trigonometry

Comments on Computation with Approximate Numbers, 479.

A Graphical Method Useful in Solving Certain Algebraic and Trigonometric Inequalities, 82.

Hyperbolic Functions, 71.

Valentine, 70.

Weights and Measures, Units and Systems of (Booklet), 280.

What Is Going on in Your School? (Editors, John A. Brown and Houston T. Karnes), 42, 103, 195, 292, 359, 434, 509, 582.

Activities Which Create Interest in a Mathematical Class, 436.

Adjusting First-Year College Mathematics for Special Interest Groups, 360.

The Bulletin Board Demonstration, 103.

An Experiment with Students Failing in General Mathematics, 360.

Experimental Work in Plane Geometry, 435.

Exploratory Development of Mathematic Kits, 42.

"M" Day in Gilmer County, 294.

Mathematics at Central High School, Florence, Alabama, 585.

Mathematics at Hammond Technical Vocational High School, 104.

A Mathematics Club for the Able, 43.

A Mathematics Exhibit, 196.

Mathematics Teachers Help Students Read Better, 106.

The Method of Selection of Mathematics Textbooks in Newark, New Jersey, 509.

Our Banking and Money System, 582.

Practice in Teaching of Plane Geometry, 292.

Report of the Investigation Concerning the Marking of Answers to Problems in Elementary School Arithmetic, 292.

The Round Robin, 509.

A School Bank, 359.

Solid Analytic Geometry for Seniors, 105.

Special Topics for Eighth Grade Arithmetic, 195.

The Students of Senior Arithmetic Class Talk It Over, 197.

The Trigonometry Class—First Assignment, 295.

A Workbook for Mathematics III, 434.

Would You Like to Teach Abroad? 204.

You Will Want to Send for This, 458.

To Help in the Teaching of Science

The National Science Teachers Association

(a department of the NEA)

offers

A complete program of activities and membership services including

- *The Science Teacher*—journal of the Association; for teachers of science on all levels and for all fields of interest
- Packets of Teaching Aids for Science—supplementary materials for teachers and students
- A Program of Science Achievement Awards for Students—entries may be submitted which show the uses and applications of mathematics to science
- Helpful Publications—two new books of special interest are:

SCIENCE IN SECONDARY SCHOOLS TODAY—Bulletin prepared by NSTA for the National Association of Secondary School Principals; discussion of problems, trends, and promising practices; forty contributors; 210 pp. \$1.50

SELECTED SCIENCE TEACHING IDEAS—based on 1952 program of Recognition Awards for Science Teachers; 15 essays; beautifully illustrated; 64 pp. \$1.50; \$1.00 to NSTA members and subscribers.

Prepaid Orders Sent Postpaid

NATIONAL SCIENCE TEACHERS ASSOCIATION

1201 Sixteenth St., N.W.

Washington 6, D.C.