TexMATYC News

February 2010
www.texmatyc.org

President's Message

Let's Do the Math!

On behalf of the TexMATYC board, I proudly present to you our new logo that was adopted last December. For several months, we searched for the perfect new symbol for our organization. We believe that we found it!

The new logo is an emblem of our great state with the famous sine wave strategically located in the center. We are indebted to several talented individuals who voluntarily made generous contributions to this effort. Without a doubt, this new up-to-date image will serve us well for many years.

Look for our new identity on our website and all of our official documents. As we launch this new era of our association, we want mathematics to be the center of higher education at Texas two-year colleges. Together we will make a difference!

2010 TCCTA/ TexMATYC Conference
The 2010 TCCTA / TexMATYC conference will be held at the Westin Galleria in Houston on Thursday, March 4 through Saturday, March 6. The meeting will begin with a preconference workshop, Developmental Education Research and Initiatives, on Thursday, 1:00 p.m. – 4:00 p.m. The cost of the workshop is $30 with a $5 discount for TexMATYC members. Reserve your seat by completing the registration form on page six.

Paula Wilhite

This workshop will focus on recent research findings and current initiatives designed to improve developmental mathematics education. Participants will have an opportunity to discuss with their peers methods for improving student achievement. An emphasis will be made on the importance of conducting research so that we can systematically learn from both the faculty members and students and share this knowledge with the broader educational community. Participants will learn about the AMATYC New Life for Developmental Mathematics Project, the Carnegie Foundation for the Advancement of Teaching (CFAT) - Dana Center Statway Project, the Amarillo College (AC) Mathematics Outreach Center, and Tarrant County College (TCC) District ModMath Project. Speakers for the workshop are the following: 1) Peg Crider, Charles A. Dana Center of University of Texas, 2) Greta Harris-Hardland, Tarrant County Community College, 3) Kathryn Wetzel, Amarillo College, and 4) Linda Zientek, Sam Houston State University. The moderator is Mel Griffin, Walden University. I hope to see you in Houston.▪

Paula A. Wilhite
Northeast Texas Community College

In This Issue

Texas Mathematical Association of Two-Year Colleges. Affiliate to the American Mathematical Association of Two-Year Colleges.

2010 TCCTA/TEXMATCYC Conference Program

March 4-6, Westin Galleria - Houston

Thursday, 1:00 – 4:00 p.m.

Developmental Education Research and Initiatives: The New Life and the Statway Projects

Nationally, approximately 40 percent of students in public two-year colleges are enrolled in remedial courses, and the percent of students enrolled in developmental mathematics courses exceeds enrollment in developmental reading and writing courses. This presentation seeks to highlight recent research findings on developmental mathematics education. An emphasis will be made on the importance of conducting research so that we can systematically learn from both the faculty members and students and share this knowledge with the broader educational community. Participants will learn about the AMATYC New Life for Developmental Mathematics Project and the CFAT and Dana Center Statway Project, and they will have an opportunity to discuss with their peers methods for improving student achievement.

An overview of the Amarillo College (AC) Mathematics Outreach Center will be given. While the AC Developmental Mathematics program has been in place for close to 30 years, a recent and very visible change to the Program is the Mathematics Outreach Center (ORC) which provides tutoring for both developmental-level and transfer-level math students. The number of tutoring sessions has increased by 1176.9 percent in four years and developmental students' test grades have been proven to increase as much as two letter grades. The Mathematics ORC was nationally recognized for its academic excellence by the National Association for Developmental Education (NADE) in Spring 2009. The ORC was awarded the John Champaign Memorial Award, which is given to only one program in the country each year. The program must exemplify the innovative and economical use of resources to effectively reach students. The ORC was acknowledged as an exemplary program due to its innovative funding, cross-discipline cooperation and support and student success.

Tarrant County College District ModMath Project: The idea to create nine one-hour modules for teaching developmental math came out of two years of research and reaching out to area universities and high schools. Our traditional three-hour courses had success rates (C or better) of around 38 percent to 44 percent. Giving grades every five weeks and pre-testing students to place at a more individual level has allowed TCC to work toward mastery of content. This presentation will detail the Learning Outcomes taught in each mod, the current enrollment and success rates, the history of development of the program and THECB grant to expand the program.

Moderator: Mel Griffin, Walden University, MSED Mathematics Specialization Coordinator

Short Bio: Linda Zientek is an Assistant Professor in Mathematics Education at Sam Houston State University. She is an active member of the Southwest Educational Research Association (SERA) and currently serves as the SERA Program Chair/President-Elect. For ten years, she was a community college mathematics instructor. Her research interests include community college and P16 initiatives, improving student learning and quantitative research methods. Linda has served as president of the Texas Mathematical Association of Two-Year Colleges, Conference Chair for the 2007 Southwest Regional Conference of the American Mathematical Association of Two-Year Colleges, Chair of the Mathematics Section of the Texas Community College Teachers Association (TCCTA) and as a member of the TCCTA Legislative Committee, 4th Year of Mathematics Committee, and Phase I of the Texas Higher Education College Readiness Vertical Team. She currently serves as chair for the Texas Partners in P-16 Mathematics (TPiPM) Committee. Dr. Zientek was one of 15 people who attended a Seattle workshop on the AMATYC New Life for Developmental Mathematics Project.

Short Bio: Peg Crider is a Mathematics Education Consultant with the Charles A. Dana Center at the University of Texas, Austin. She retired as a Professor of Mathematics after 20 years teaching mathematics and developmental mathematics at Lone Star College-Tomball. She twice received the LSC Teaching Excellence Award (with NISOD recognition). She has served as Secretary of the Texas Mathematical Association of Two-Year Colleges (TexMATYC), Chair of the Mathematics Section of the Texas Community College Teachers Association (TCCTA), member of the International Conference on Technology in Collegiate Mathematics (ICTCM) and the Texas Partners in P-16 Mathematics Committee (TPiPM). In collaboration with the LSC-Tomball Mathematics Department, she wrote graphing calculator manuals for developmental mathematics. Proceeds from that publication funded three endowed scholarships and scores of individual scholarships. Dr. Crider attended the 2009 AMATYC conference and participated in joint meetings with the New Life project members and the Dana Center/ Carnegie Foundation for the Advancement of Teaching Statway project.

Short Bio: Having taught for over 20 years, Kathryn Wetzel is a Professor at Amarillo College and is Department chair of the Mathematics and Engineering Departments. She is a recipient of the John F. Mead Faculty Excellence Award from Amarillo College and the Minnie Stevens Piper Award from the state of Texas. While her

degrees are all in engineering, she is fascinated by how the brain works and has co-written the book *Mind Games the Aging Brain and How to Keep It Healthy* as well as having written a weekly column on mental agility. As the creator of the Mathematics Outreach Center, she is proud to say the Center is also a finalist for the Texas Star Award and the Bellwether Award.

Short Bio: Greta Harris-Hardland has been full-time at Tarrant County College for nine years. She is currently a math department chair, Project Coordinator/Evaluator for the Modmath THECB Expanded Project Grant, and District ModMath Coordinator for the five campuses. Greta served as a Texas ISD math curriculum coordinator to align K-12 mathematics, taught as adjunct math faculty in San Diego and Texas, and taught high school mathematics in Ohio for ten years.

This workshop is scheduled for Thursday, March 4, 1:00 a.m. – 4:00 p.m. The cost of the workshop is $30 with a $5 discount for TexMATYC members.

Friday, 9:30-10:40 a.m.

Featured Speaker: Uri Treismann - "Building a Statway to Heaven"

Developmental mathematics has become a burial ground for the aspirations of too many of our students. A new initiative of the Charles A. Dana Center and the Carnegie Foundation for the Advancement of Teaching is building a set of new pathways to and through college-credit transferrable mathematics courses. It's a joyful conspiracy and you're all in invited.

Philip "Uri" Treisman is professor of mathematics and of public affairs at The University of Texas at Austin, where he serves as executive director of the Charles A. Dana Center for Mathematics and Science Education. Uri chairs the steering committee of the Urban Mathematics Leadership Network—a coalition of 24 large urban districts together serving four million students that works to improve PreK–12 mathematics teaching and learning. He is a member of the leadership team of the Strategic Education Research Partnership (SERP) and a senior partner at the Carnegie Foundation for the Advancement of Teaching. He serves on the National Advisory Board of the Military Child Education Coalition (MCEC) and serves as chief juror and senior research scientist for a Department of Defense-sponsored study of mobility in military families and its effects on their children's education. He serves on the boards of The New Teacher Project and the AFT's Innovation Fund.

Uri serves as a senior advisor to the trustees of the Robert N. Noyce and Charles A. Dana Foundations. For his work on nurturing minority student high achievement in mathematics, he was named a MacArthur Fellow 1992–1997. The Harvard Foundation of Harvard University named him "2006 Scientist of the Year" for his outstanding contributions to mathematics. In all his work, Uri is an advocate for equity and excellence in education for all children.

Friday, 10:50 a.m. - 11:50 a.m.

Keynote Speaker: Ron Larson - "Narrowing the Mathematics Curriculum"

In the fall of 2006, the National Council of Teachers of Mathematics published its recommendations for overhauling K-8 education in the United States. The report is called "A Focal Points Curriculum." This talk describes this new "narrower and deeper curriculum" and makes recommendations for a similar narrowing of the curriculum for college courses: elementary algebra, intermediate algebra, college algebra, and precalculus.

Ron Larson received his Ph.D. in mathematics from the University of Colorado in 1970. At that time he accepted a position with Penn State University in Erie, Pennsylvania, and currently holds the rank of professor of mathematics at the university. Ron is the lead author of over forty mathematics textbooks from 6th grade through calculus. Many of his texts, such as the 9th edition of his calculus text, are leaders in their markets. Ron Larson is one of the pioneers in the use of multimedia to enhance the learning of mathematics. He has authored multimedia programs that range from 1st grade through calculus. To help with the development of his textbooks and multimedia programs, Ron founded Larson Texts, Inc., which with its publishing wing, Big Ideas Learning, employs about 60 people. Ron's most recent new textbook series is called "Big Ideas Math". It is the first middle school mathematics series to adhere to the NCTM's new "Focal Points Curriculum."

Friday, 2:00 – 2:30 p.m.

TexMATYC Official Meeting

Friday, 2:40 – 3:30 p.m.

Breakout Sessions:

Session I: Heather Gamber - Mayan Mathematics

This talk is for Foundations of Mathematics instructors. Mayan number systems for counting objects and counting calendar years, the symbols and glyphs used and the meth-

ods for performing basic operations will be discussed. Mayan geometry revealed in the layout of their pyramids will be presented.

Heather Gamber obtained her Ph.D. in Statistics from the University of Wisconsin, Madison. She is a founding faculty member of Lone Star College-CyFair where she has worked for the last 6 years. She was awarded a Faculty International Exploration grant to study Mayan Mathematics in Chiapas, Mexico during summer 2009. Dr. Gamber currently serves on the board of TexMATYC as secretary and newsletter editor.

Session II: Karen Wyrick - "Do the Math! Increasing Student Engagement through Course Redesign"

Math redesign at Cleveland State Community College has been very successful in increasing student learning and success. The program has drawn national attention, winning the 2009 Bellwether Award and being featured in The Chronicle of Higher Education. Those who are exploring course redesign will be interested in this program.

Karen Wyrick is the math department chair at Cleveland State Community College and has taught math for 18 years. She has been involved in the redesign of the math department, which has greatly increased student success in both developmental math and college level math.

Friday, 3:40 – 4:30 p.m.
Breakout Sessions:

Session I: Joanne Peeples - "Is 'e' Really Natural???"

You've seen "natural logarithms" – those with base e - and you've used the exponential function base e, but just how natural is the number "e" ? I'd like to share with you a bit about the origin of "e", and weave in some interesting facts and tales about "e". Hopefully you'll leave this talk with some new ways to answer the student who asks "what is 'e' ?"

Joanne has been teaching math at the college level for many years - the last 20-plus at EPCC. In 2006 she received the TexMATYC Teaching Excellence Award, and in 2009 she won the EPCC Teaching Excellence Award. She is active in professional organizations and is currently president of NMMATYC.

Session II: Ed Bock - "PASS - Prerequisite Assessment of Skills for Success"

PASS (Prerequisite Assessment of Skills for Success) was instituted at Collin College for mathematics students in three areas: College Algebra, Business Calculus I, and Science Calculus I in Spring 2008. It is a package consisting of a day-one exam and a subsequent day-two informational and advisory set of analyses and recommendations for students taking the exam. The session will highlight the philosophy of the program, the Collin professors' implementation of this package, and a detailed statistical analysis of the program.

A basic departmental philosophy of the goals of the PASS program for each of the three courses will be distributed to all attendees and thus discussed. Participants may review past versions of the PASS exams and examine the skill set required for success in the three aforementioned courses. They may then evaluate and discuss the total package given to the students and consequently remark and critique the suggestions and advice given to the students.

Ed Bock earned a B.S. in Applied Mathematics from UT Dallas in 1977 and an M.S. in Applied Mathematics from UT Dallas 1979. He has been a full-time mathematics professor at Collin College in Plano since 1999. He was previously a software consultant for major oil companies Sun, Arco, Mobil, Exxon and Texaco.

Saturday, 9:00-10:15 a.m.

Speaker: Maria H. Andersen - "Playing to learn math?"

Current technology gives us systems that teach students algebra using mastery and flexible pacing, but they just mimic the process of working through a textbook (only on a computer screen). We should leverage technology and research about learning to begin using games, play, and pattern recognition as a method for learning algebra.

Maria H. Andersen is a math instructor at Muskegon Community College (in Michigan), president of MichMATYC, and director of AMATYC Technology Workshops. She is an expert on teaching with technology and has recently begun experimenting with the use of "play" and non-linear learning in her math classes. You might find Maria blogging on the internet at www.teachingcollegemath.com.

Saturday, 10:30-11:30 a.m.

Speaker: James Stewart
"Enlivening the Classroom with Data Collection, Contests, and Music"

Professor Stewart will offer suggestions for engaging students[1] attention in the mathematics classroom (college algebra, precalculus, and calculus) in such a way as to increase their understanding and make them more active learners. The methods include collecting data from physical demonstrations, historical anecdotes, contests, and musical performances.

James Stewart received his M.S. degree from Stanford University and his Ph.D. from the University of Toronto. After two years as a postdoctoral fellow at the University of London, he became Professor of Mathematics at McMaster University. His research has been in harmonic analysis and functional analysis. Stewart's books include a series of high school textbooks as well as a best-selling series of calculus textbooks. He is also co-author, with Lothar Redlin and Saleem Watson, of a series of college algebra and precalculus textbooks. Translations of his books include those into Spanish, Portuguese, French, Italian, Korean, Chinese, Greek and Indonesian.

A talented violinist, Stewart was concertmaster of the McMaster Symphony Orchestra for many years and played professionally in the Hamilton Philharmonic Orchestra. Having explored the connections between music and mathematics, Stewart has given more than 20 talks worldwide on Mathematics and Music and is planning to write a book that attempts to explain why mathematicians tend to be musical.

Stewart was named a Fellow of the Fields Institute in 2002 and was awarded an honorary D.Sc. in 2003 by McMaster University. The library of the Fields Institute is named after him. The James Stewart Mathematics Centre was opened in October, 2003, at McMaster University.▪

TexMATYC

TCCTA/TexMATYC Conference

March 4-6, 2010

Westin Galleria Hotel

Houston, Texas

www.tccta.org

2010 Registration Form

TexMATYC Preconference Workshop

TCCTA – TexMATYC Annual Conference

"Developmental Education Research and Initiatives"

Thursday, March 4, 2010

1:00 p.m. – 4:00 p.m.

Westin Galleria – Houston

Name: _____

Institution: _____

Mailing Address: _____

_____

Office Phone Number: _____ Email Address: _____

TexMATYC Membership Status: _____ Member _____Non-Member

Amount Enclosed $_____ ($30 with $5 discount for TexMATYC members)

If non-member, would you like to apply $5 of your registration fee towards a one-year TexMATYC membership? ____ Yes ____No

Make check payable to TexMATYC.

Mail completed registration form and payment to the following address:

Habib Y. Far, TexMATYC Treasurer
Lone Star College-Montgomery
3200 College Park Dr.
Conroe, TX 77384

New Life Project for Developmental Mathematics (AMATYC)

by Jack Rotman, Chair of AMATYC Developmental Math committee, leader of 'New Life' project

The New Life Project of the American Mathematical Association of Two-Year Colleges (AMATYC) Developmental Mathematics Committee is working to design and implement a new vision for developmental mathematics. The new vision focuses on developing mathematical reasoning, skills and critical thinking for all developmental mathematics students as well as creating new academic pathways in mathematics for two-year college students. Students will experience and develop skills with diverse mathematics selected from basic areas, and this content will be designed to involve significant applications that students can identify with in a variety of disciplines and provide strong support for quantitative literacy.

The New Life Project has three goals:

1. Develop consensus around a new Mission Statement for Developmental Mathematics.
2. Build curricular models which follow from this Mission Statement with an explicit goal of a reduction in the number of courses a student would need to complete.
3. Build and create support for increasing the "readiness state" of the system (college, state, and national policy) to enable faculty to implement these curricular models..

When this project is successful, most colleges will have replaced their old developmental mathematics courses with a system reflecting the new models. In addition, the proportion of students who complete their mathematics pathway will have increased dramatically.

Recognizing that these broad changes in the content and delivery of developmental mathematics to two-year college students will necessitate system changes beyond the two-year college classroom, this project also includes activities that will facilitate dialogue among stakeholders and implement changes at the institution, state, and national levels.

The New Life Project is not the first project to address the needs of the profession, and previous efforts have had limited success. Fundamentally, this Project is different because of the process used: the New Life Project seeks to accomplish its goals by inviting more and more professionals into the conversation. We seek common understandings and consensus, rather than expecting professionals to implement somebody else's best thinking; we will grow and build systemic solutions, rather than encourage the use of separate strategies.

How can YOU become engaged?

1. Join AMATYC (see http://amatyc.org/Join-AMATYC/index.htm)
2. Join the Developmental Mathematics committee (see http://devmath.amatyc.org/join.htm)
3. Visit the New Life project online (see http://dm-newlife.wikispaces.com/)
4. Join the community bringing new life to developmental mathematics (http://dm-live.wikispaces.com/)

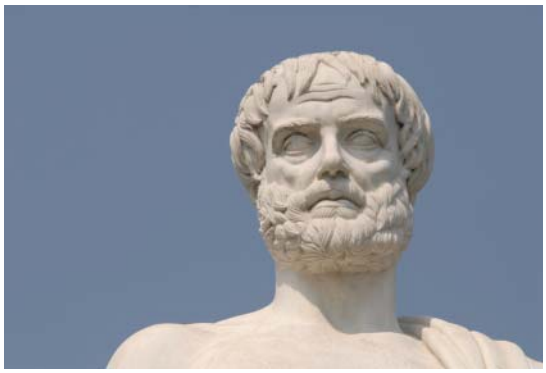
Your first step might be visiting this community web site to use the "Guide to New Life" link (the direct link is http://dm-live.wikispaces.com/NewLifeGuide) – this is a series of short video presentations on the New Life project.▪

Aristotle and Mathematics

by David Price, Tarrant County College, Arlington

Aristotle (384-322 B.C.) was not primarily a mathematician, but as a member of Plato's Academy for twenty years, he was thoroughly familiar with the mathematics of his day. After all, the motto above the entrance of the Academy was: "Let no one ignorant of geometry enter here." As the father of deductive logic, his contributions to mathematics focused largely on the epistemological foundations of the subject. His seminal work on the nature of axioms and definitions prepared the way for the axiomatic method as the characteristic means of organizing a body of mathematical knowledge.

Two mathematical predecessors of Aristotle contributed insights on which he built. Hippocrates of Chios (460-380 B.C.) (not to be confused with the father of medicine) organized theorems so that later results could be proved on the basis of earlier ones. He also introduced the method of proof by contradiction and calculated some curvilinear areas, called lunes, by reducing them to rectilinear ones. A lune is a figure bounded by arcs of two circles of unequal radii. Hippocrates' work on lunes was motivated by his attempt to solve the problem of squaring the circle, which, of course, he was unable to do.



Eudoxus of Cnidus (408-355 B.C.) also anticipated some of Aristotle's work by being the first mathematician to state his axioms explicitly. He thereby avoided problems such as those encountered by the Pythagoreans, whose implicit assumptions about the nature of number led to major difficulties when incommensurable magnitudes were discovered. Another of Eudoxus' vast range of achievements was the development of the method of exhaustion, which he used, for instance, to prove that the areas of two circles have the same ratio as the squares of their radii and that the volume of a cone is one third the volume of the cylinder with the same base and height.

Using developments in Greek geometry as a model, Aristotle formulated the laws of logic by explicitly stating the law of contradiction and the law of excluded middle. The law of identity is implicit throughout his work although it was not formalized until some centuries later. He also advanced the concept of a specific science as a body of knowledge with its own individual content. No previous thinker had recognized subdivisions of learning; rather, all knowledge was classified as philosophy. Aristotle held that each area of study has its particular subject matter, which should be organized axiomatically by identifying the fundamental assumptions that lie at its foundation and then deducing their consequences. Using logic as a common base, scholars could focus on specialized intellectual pursuits.

In addition to his work on deduction, Aristotle was the first thinker to recognize the importance of inductive logic. Neither he nor any other Greek philosopher of the time had an advanced concept of induction. The formulation of the experimental method lay centuries in the future. However, he recognized that the premises of a deductive argument are frequently justified inductively and that the combined employment of both deduction and induction is often necessary to arrive at truth.

Socrates had identified the importance of definitions, but Aristotle was the first philosopher to state rules to guide their construction. In particular, he recognized that a correct definition must place the term being defined in a larger class, called the genus, and distinguish it from other members of the genus by means of an appropriate criterion, called the differentia. He also understood the need for undefined terms; otherwise, an axiomatic structure does not have a starting point.

Mathematicians who applied Aristotle's work included Euclid (c. 325-265 B.C.), Archimedes (287-212 B.C.), and Apollonius (262-190 B.C.). By deducing the consequences of explicitly stated axioms and definitions, Euclid organized the *Elements* specifically on Aristotelian principles and demonstrated the epistemological efficacy of the axiomatic method. In fact, his work was so systematic and comprehensive that it eclipsed previous books on Greek geometry, including one written by Hippocrates.

Euclid's approach did differ from the Aristotelian model in one respect: He did not begin with undefined terms. There are different theories as to why Euclid tried to define all of his concepts. One is that he simply did not understand the need for undefined terms. Another is that he did not intend to define all of his concepts formally; rather, in some cases he was simply explaining how he meant to use a term. There is a certain plausibility to this latter explanation. For example, Euclid defined a point as "that which has no part." The Pythagoreans had assumed that points are divisible, and Zeno had exploited that view in the construction of some of his paradoxes.

Euclid's approach to definitions may have been an attempt to avoid such problems. Not until the nineteenth century did mathematicians recognize the necessity of basing an axiomatic system on undefined terms.

Archimedes, the greatest mathematician of ancient Greece, used the axiomatic approach systematically to calculate curvilinear areas and volumes and to obtain an excellent estimate of the value of pi. For instance, he computed the area of a parabolic segment, the area of the first loop of the spiral that bears his name, and the volume of a sphere. His favorite result concerned a sphere inscribed in a cylinder so that the diameter of the sphere is equal to the height of the cylinder and the circumference of the sphere is equal to the circumference of the cylinder. He proved that the surface area and volume of the sphere are two thirds of the surface area and volume of the cylinder respectively. In obtaining these results, he demonstrated the power of Eudoxus' method of exhaustion, which Euclid had presented in the *Elements*. In addition to his work in mathematics itself, Archimedes also organized his results on levers and hydrostatics axiomatically and thereby launched mathematical physics as another field of knowledge.

Apollonius' great achievement was to provide a unified, deductive treatment of the conic sections. Other mathematicians had constructed these curves separately and had not fully recognized their fundamental commonality. Apollonius showed that all three conics could be cut from a double-napped cone by simply altering the inclination of the intersecting plane. He was the first to understand that a hyperbola has two branches, and his use of a Pythagorean technique called application of areas led him to introduce the very terms, parabola, ellipse, and hyperbola, that we still use today. Just as Euclid's *Elements* replaced earlier works on geometry, Apollonius' *Conic Sections* superseded previous books on conics, including one written by Euclid himself.

There are hints of analytic geometry in Apollonius' work in that he developed equations for the conics that are the geometric equivalents of the algebraic equations we use today. However, it would be inaccurate to consider him to be the true father of analytic geometry. Although he recognized that equations could be derived from curves, he did not understand that curves could represent equations. That insight had to await the work of Descartes and Fermat.

The deaths of Alexander the Great in 323 B.C. and Aristotle a year later marked the transition from the Hellenic to the Hellenistic period of Greek history. Just as Aristotle's work on the axiomatic method prepared the way for Hellenistic mathematicians, such as Euclid, Archimedes, and Apollonius, the achievements of these thinkers influenced mathematical and scientific developments in future centuries. Kepler used ellipses to describe planetary motion, and Galileo utilized parabolas to explain the motion of falling bodies. In the hands of Newton and Leibniz, Eudoxus' method of exhaustion became the foundation for integral calculus. The pervasive use of the axiomatic method in mathematics to this day continues to demonstrate Aristotle's fundamental impact on the subject.▪

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Visit us at www.TexMATYC.org

Q: What do you call an angle that has been in an automobile accident?

A: A wrecked-angle (rectangle)

Got News?

If you know of any exciting news in Mathematics, have it published in your TexMATYC newsletter. Submit articles to:
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