TexMATYC News

Fall 2010

www.texmatyc.org

President's Message

Greetings Colleagues,

On June 19, 2009, the 81st Texas Legislature made the House of Representatives bill 2504 effective immediately. Under certain provisions of the bill, each institution of higher education is required to provide a curriculum vitae for each instructor, produce a course syllabus for each class section taught during a particular semester, and display a departmental budget report for each undergraduate classroom course offered. Under other provisions, each institution is also required to establish and maintain an online list of work-study employment opportunities, sorted by department as appropriate. In addition, the THECB is required to provide uniform standards regarding the cost of attendance at institutions of higher education. All of the aforementioned information is to be made available to the public on each institution's website in a manner that is consumer-friendly and readily understandable to prospective students and their families.

Specifically affecting each faculty member, he or she is directly responsible for forwarding a one-time updated curriculum vitae to the department chair, along with an instructor's syllabus for each class section.

Raja Khoury

What is on the horizon of the next Texas Legislative session? Among the many potential changes that will affect mathematics, as well as other disciplines in community colleges, is the future of the semester census date with regard to state budget distribution. Many college administrators believe census date rosters will be replaced by end-of-semester rosters. If the Texas Legislature implements this provision, the future state funding for all institutions will be based on student retention in our classrooms.

The TCCTA/TexMATYC annual conference will be early in the spring this academic year, and will be held from January 27–29, 2011 in San Antonio, Texas. Thanks to our fine speakers, the TexMATYC executive board (with the approval of the TCCTA Math chair) has put together an outstanding program of various interests primarily devoted to members of TexMATYC. This will be an invaluable opportunity to meet other professors, increase our professional network, and most of all, enrich our professional development. I sincerely hope that the TCCTA/TexMATYC program meets your interest.

We are thankful to professor Kathleen Cage Mittag from the University of Texas-San Antonio for starting us off with a pre-conference workshop on "Hands-on Activities to Explore Linear, Quadratic and Exponential Functions". This workshop is scheduled for Thursday, January 27 from 1:00 to 4:00PM at the Marriott Rivercenter Hotel in San Antonio. The cost of this workshop is $25 for TexMATYC members and $30 for non-members (a light lunch at noon and afternoon snacks are included in the fee). Please use the link http://www.texmatyc.org to download a

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

President's Message, continued

registration form. Alternatively, you may use your PayPal account to register and pay with your credit card. Enrollment is limited, so please reserve your seat today.

Additionally, we are thankful to professor Patrick Averbeck for his dedication in receiving the National Science Foundation grant to fund the Statistics Workshop. Professor Jamis Perrett from the Texas A&M University will be the speaker. Dr. Perrett is also the director of AP Statistics and Statistics Education and the author of "A SAS/IML Companion for Linear Models." His Statistics workshop is titled "Creating a Lively Class" and is designed to discuss and experience activities and projects that can benefit an introductory statistics course, as well as, to discuss technology tools and other resources that can aid class instruction. It is scheduled for Thursday, January 27 from 1:00 to 4:00 PM and is concurrent to the aforementioned workshop at the Marriott Rivercenter Hotel in San Antonio. The cost of this workshop is free for all attendees but a registration form from is required from the http://www.texmatyc.org. Please reserve your seat today because seating is limited to the first 25 registrants.

The TexMATYC executive board is honored to present the conference Keynote Speaker, Marty Triola, Professor Emeritus of Mathematics at Dutchess Community College, where he has taught statistics for over 30 years. Marty is the author of the Triola Statistics Series. His books have been translated into several foreign languages, and his Elementary Statistics book has been the leading statistics textbook for the past 15 years. Marty is also a co-author of Biostatistics for the Biological and Health Sciences, Statistical Reasoning for Everyday Life, and other books. His presentation is titled "Probability for Reality".

Five more speakers are scheduled for Friday. Former Mathematics Instructor Peg Crider at Lone Star College will start the day with her presentation on "STATWAY and MATHWAY: Pathways to and through College-Level Math". The afternoon program consists of 4 presentations. Mathematics Instructor Marion Foster at Houston Community College will start the afternoon presentations on "Project: Jobs! Jobs! Jobs!". She will be followed by Professor Shellene Foster at Collin College who will be presenting on "Early Introduction to Hypothesis Testing" ; Mathematics Instructors Teri Barnes and Lisa Lindloff from McLennan Community College will be presenting on "Using Camtasia, OneNote, and Web 2.0 to Enhance a MyMathLab Course". Mathematics Instructors Heather Gamber and Chinyoung Bergbauer at Lone Star College will conclude the Friday program with a presentation on "Comparison of US and South Korean 4th Grade Math Education".

Three speakers are scheduled for Saturday. Professor Sherri Messersmith from College of DuPage will start the day with her presentation on "Serving Students with Disabilities: Strategies for the Classroom". She will be followed by professors David Price and Elise Price from Tarrant County College presenting on "Mathematics and the Founding Fathers". Professor Rob Eby from Blinn College will conclude the Saturday program with his presentation on "Using Online Homework Systems Effectively".

I hope to see you all in San Antonio for the TexMATYC sessions in conjunction with the Texas Community College Teachers Association (TCCTA) Conference. Thank you for making TexMATYC part of your professional activities.

Raja Khoury
TexMATYC President▪

Join TexMATYC Today

JOIN NOW! Become a member of the Texas Mathematical Association of Two-Year Colleges (TexMATYC). Why should you join, you ask? Here are just a few of the reasons:

- Only $5 per year membership dues – what a bargain!
- Looks great on your yearly performance review
- It is an affiliate of The American Mathematical Association of Two-Year Colleges (AMATYC)
- Lets you have input into statewide and nationwide mathematical discussions concerning the development of effective mathematics programs
- Allows you to join a community of statewide two-year college mathematicians and share your experiences
- Provides professional development opportunities to help you study and keep up with new trends in mathematics
- You can improve mathematics-related experiences of students in two-year colleges at your institute and across the state

For your convenience, there are two ways to join or renew your membership:

1) Pay online safely through the TexMATYC site at http://www.texmatyc.org. Just click the MEMBERSHIP icon on the left of the screen. You will see a blinking ball that links you to the online registration system. Or,

2) Use the form on the following page – fill it out and mail it in, with your payment.

If you have questions about membership or if it is time to renew your membership, please contact Habib Far, treasurer at (936) 273-7093 or HFar@texmatyc.org.▪

Texas Mathematical Association of Two-Year Colleges

MEMBERSHIP and INFORMATION SHEET

Today's Date: _____

NOTE: If you are a renewing member, just fill out your name and the membership box below.

TITLE (circle one) Dr. Mr. Ms.

NAME _____

AMATYC MEMBER? (Yes/No) _____

COLLEGE _____

COLLEGE ADDRESS _____

_____

OFFICE PHONE ( ) _____

HOME ADDRESS _____

_____

HOME PHONE ( ) _____ COLLEGE PHONE ( ) _____

EMAIL ADDRESS _____

WHICH ADDRESS SHOULD TexMATYC MAIL GO TO? _____ COLLEGE _____ HOME

MEMBERSHIP: New _____ Renewing _____
Dues: $5.00 per year x _____years = $ _____
Paid by: _____ check(#_____) _____ cash

Please return this form to:

Habib Far
Montgomery College
3200 College Park Drive
Conroe, TX 77384
(936) 273-7093
HFar@texmatyc.org

Please keep this TexMATYC membership fee receipt for your records.

Date: _____ Check Number: _____
Total Dues Paid: _____ For how many years? _____

Upcoming Conferences

NADE Annual Conference
www.nade.net
February 23-26, 2011
Washington, DC

NCTM Regional Conference
www.nctm.org
Oct 28-29, 2010
New Orleans, Louisiana

NCTM Annual Conference
www.nctm.org
April 13-16, 2011
Indianapolis, Indiana

NISOD Annual Conference
www.nisod.org
May 29 - June 1 , 2011
Austin, Texas

AMATYC Annual Conference
November 10-13, 2011
Austin, Texas

Now Accepting Teaching Excellence Award Nominations

Do you know an excellent mathematics instructor at a two-year college who deserves recognition? Nominate him or her for the 2011 TexMATYC Award for Teaching Excellence. Information on the eligibility criteria, award criteria and required information is listed below and at the TexMATYC website. DO NOT DELAY – submission deadline is December 1, 2010.

Nominees must have a minimum of five years teaching experience with the last two years in Texas. The nominee's primary assigned duties must be delivering developmental or academic credit instruction in an associate degree program. Teaching excellence is the main focus of this award. Individuals can win the award only once. Nominees may not be on the AMATYC or TexMATYC Board or nominated by an AMATYC or TexMATYC Board member. The award will be $40 plus an $80 individual membership in AMATYC for the year award winner's nomination will be sent to AMATYC. All TexMATYC awardees will be nominated for AMATYC Teaching Excellence Award, which is given in odd-numbered years. The award winner will be announced at TexMATYC official meeting held in conjunction with TCCTA.

Criteria for selection is weighted as follows:

1. Classroom Expertise: 25 points
2. Professional Involvement: 10 points
3. Interaction with Colleagues : 5 points
4. Service to Departments/Division/College : 5 points
5. Professional Development/Renewal Activities: 5 points

Information that MUST be provided:

1. Completed information form (see next page).
2. Current vita of nominee (maximum of 5 pages).
3. A single one (1)- page letter of recommendation from a student, a colleague, or a supervisor.
4. Nominator's letter of support (maximum of 3 pages).

In fairness to all candidates, no additional materials will be reviewed in the selection process. Materials not in the checklist and pages exceeding limits will be excluded from consideration.▪

Student Math League Competition

Congratulations to Tarrant County College Southwest, the Regional winners of the Student Math League (SML) Competition 2009-2010. The region is comprised of Texas, New Mexico, Oklahoma and Arizona.

The SML competition consists of fall and spring exams covering material from college algebra, trigonometry, number theory and logic. David Puente is the coordinator for the TCC's Northwest campus and coordinator for the district. He is very passionate about the competition and works off the clock to help students succeed. He holds informal sessions with students at a table close to his office. Students come and go as they wish on Fridays and one other day a week. Students print out practice tests and sit with him to address questions they have about problems they do not understand.

Tarrant County College offers ten cash prizes. First place receives $1,000, second place receives $750, third place receives $500, and values trickle down from there. Cash aside, the main prizes are in the form of scholarships. Giving scholarships by way of the Jim Bolen Math Competition are: Texas Christian University, Baylor University and University of Texas Austin. Scholarships range from about $1,000 per semester to full-paid-tuition scholarships. TCC is very fortunate to have the backing of these universities. In turn, the universities know that they are receiving quality students. Puente's work with his students has paid off tremendously. Last year, his student Samantha Crowell won a full-paid scholarship to Texas Christian University, and student Hung Doan was awarded a Dean scholarship of $13,000 per year to Texas Christian University. They were ultimately able to increase Hung's monetary award with the help of International student's funding to $39,000, which pays for three years. Many others have received scholarships from various universities.

There are 20 multiple-choice questions on each exam. Two points are given for each correct response, with a half-point deduction for each incorrect response. Problems left unanswered are not tabulated. TCC's SML competition is named in honor of the late Jim Bolen, a former instructor for TCC who was very active with the original competition.

More information about the exam along with tests and keys dating back to fall 2003, can be found at www.TexMATYC.org. Tests dating back about 20 years can be found by googling AMATYC tests.▪

Texas Mathematical Association of Two-Year Colleges

Founded 1978

2011 TexMATYC Award for Teaching Excellence Nomination Form

Name of Nominee: _____

College: _____

Job Position: _____

Address: _____

_____

Phone Number: _____ Fax Number: _____

E-mail Address: _____

Number of Years of Teaching Experience: _____

Number of Years Presently Teaching in Texas: _____

Nominator: _____

College: _____

Job Position: _____

Address: _____

_____

Phone Number: _____ Fax Number: _____

E-mail Address: _____

Email, fax, or mail all required documents to;

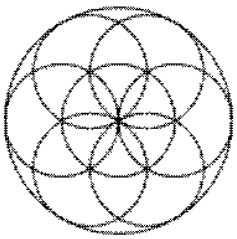
Raja Khoury, Ph.D.
Collin College, Department of Mathematics
2800 E. Spring Creek Pkwy
Plano, TX 75074-3300
Office: J-217
Phone: (972) 881-5909
Fax: (972) 881-5619
Email: RKhoury@texmatyc.org

Sacred Geometry

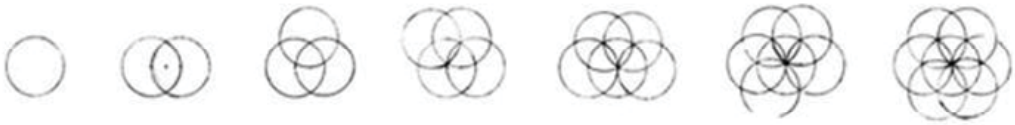
by James (Chip) Galloway, Collin College

What do most people think when they think about mathematics? They probably see math as being a very "left brain" discipline – logical analytical, and quantitative – that is used in the sciences but is completely unrelated to the humanities (art, music, even religion and spirituality). Actually, math has a very "right brain" side - artistic, intuitive, and qualitative – and is intimately related to the humanities. There are many episodes in math history where this relationship has been crucial, including: Pythagoras and number mysticism; numeration systems such as Sanskrit and Hebrew where letters represent numbers, forming a philosophical system relating ideas based on number values; and sacred geometry.

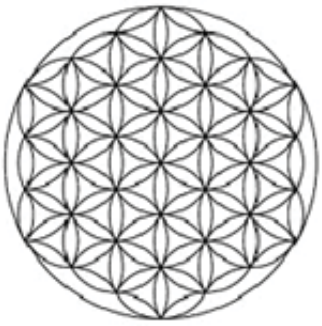
Entire books have been written on the topic of Sacred Geometry. Here, we'll focus on one idea from Sacred Geometry: the 7 Circle Pattern.



It has been said about this pattern that everything that is, was, or will be can be found in this figure. That sounds ridiculous – or is it? First let's look at how this figure is formed. Start with a circle of some radius. Go to the edge of that circle and draw another circle of the same radius – each circle touches the other's center. Go to a point where the first two circles intersect and draw another of equal size. Then repeat this step until you have a circle in the center with 6 circles around it – a 7 Circle Pattern.



This pattern can then be expanded to form what is known as the Flower of Life:



The pattern can actually be extended outward indefinitely. We can then also erase some of the circles to form other patterns such as the Fruit of Life

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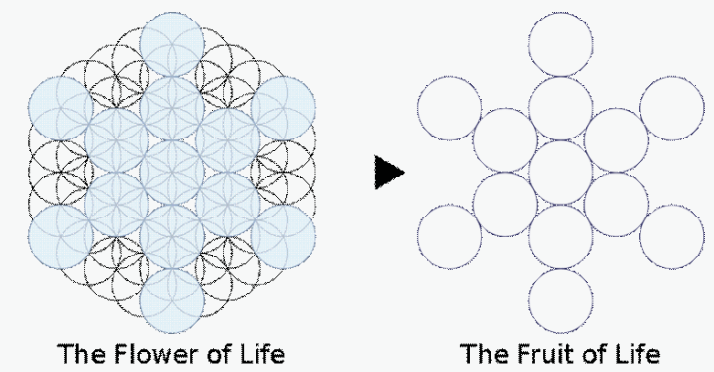
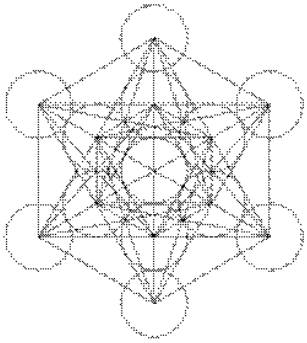
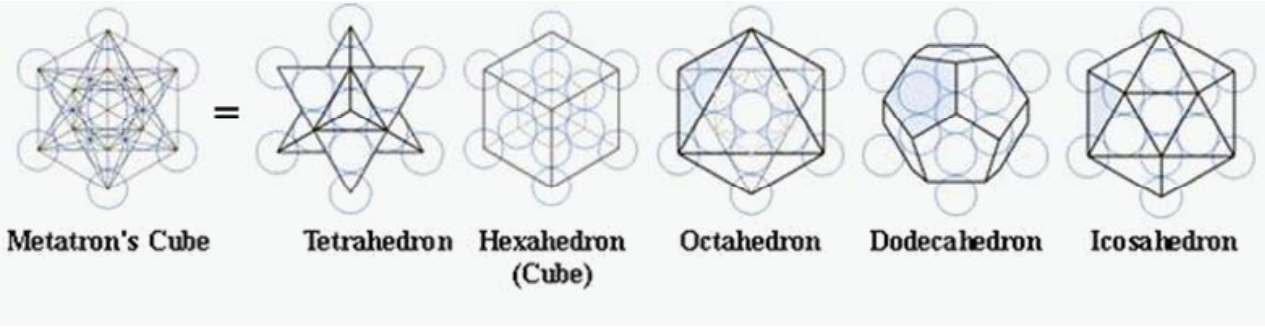


We can also connect the centers of the circles with lines, forming figures like Metatron's Cube:



Now for a slight digression. In three-dimensional geometry, there are five regular polyhedra – solid figures with faces composed of congruent, regular polygons. In a regular polyhedron, every face is identical, every edge is identical, and every angle is identical. There are five regular polyhedra: the tetrahedron, the cube, the octahedron, the dodecahedron, and the icosahedron. They are sometimes called the Platonic solids because Plato described them in his dialogue Timaeus. These Platonic Solids are the basis for molecular structure and crystal structure. For example, fluorite often grows naturally as an octahedron and pyrite forms natural cubes and dodecahedra. The Platonic Solids are a foundation for much physical structure.

Now look back at Metatron's Cube which was derived from the 7 Circle Pattern and the Flower or Life. The outlines of the 5 Platonic Solids can be found in Metatron's Cube:



The 7 Circle Pattern and its variations seem to contain the patterns of our physical world! Other interesting patterns also emerge. Another figure that emerges from the Flower of Life is the Egg of Life:

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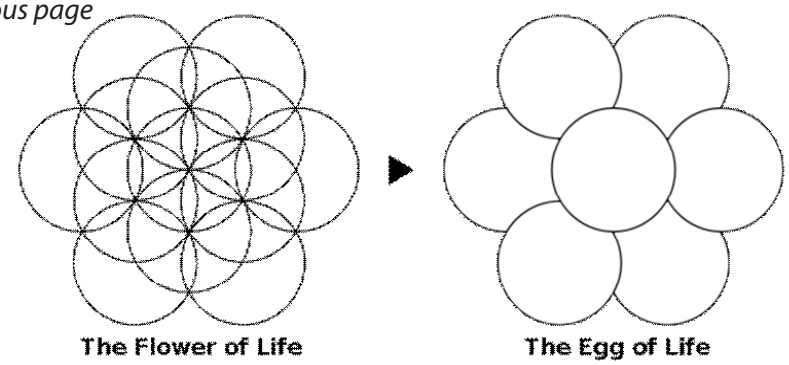
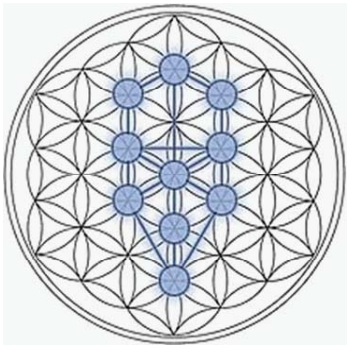


The Flower of Life The Egg of Life

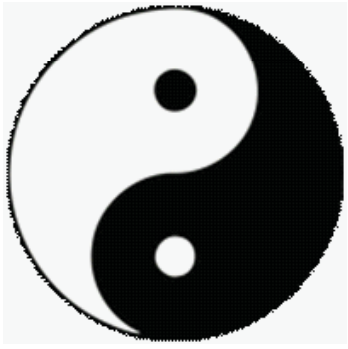
If we change our perspective a bit, we can look at the Egg of Life as a depiction of 8 spheres, a shape that a multi-cellular embryo passes through in the first stages of creation. Also, in the realm of biology, there are several kinds of eye structure that occur in the Animal Kingdom and it is said these structure can all be found within the Flower of Life pattern.

How about religious or spiritual symbolism? Can you see how the Star of David is found in the Flower of Life from referring to the figure above with the two tetrahedra?

Another important symbol is the Tree of Life from the Kabbalah and it is found in the Flower of Life:



See if you can also find the images of crosses and the Yin Yang symbol from Taoist philosophy:



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We could continue with many more examples, but it should be clear that within this 7 Circle Pattern and its variations lie not only the basic blueprints with which our world is created but much symbolism which is an inherent part of our culture. Recall what has been said about the 7 Circle Pattern: All that is, was, or will be is found in that figure. Now that statement does not seem so ridiculous. In fact there is something very profound about this pattern!

Think of the creation stories that occur in ancient writings including the Old Testament. They claim the earth was created in 7 days, the 7th day being a day of rest. And a description of the 7 Circle Pattern is that it is made up of 7 circles with one circle, the one in the center, being a circle of equilibrium or rest. Our pattern is literally a geometric symbol for creation. In fact, the 7 Circle Pattern is usually referred to as The Genesis Pattern.

The Flower of Life is actually an ancient symbol, found in temples in Egypt, China, Japan and many other locations around the globe. It can be found in Islamic art. And look at this page from Leonardo da Vinci's notebooks:

The Flower of Life is a pervasive symbol in cultures throughout history and in our modern world. We can understand why it is held in such reverence after we get a feel for its significance. This one short topic shows us a completely different mindset with which to approach mathematics and how it has been viewed in the past.

To summarize the philosophy of Sacred Geometry:

Geometry is the basis of all creation.

There is nothing on any level of existence that does not have geometry behind it.

To understand how the actual geometry works is a crucial first step in convincing our rational minds of the reality of the One Spirit that moves through everything.

To quote Galileo Galilei: "Mathematics is the pen with which God has written the universe."

FURTHER READING:
Sacred Geometry by Robert Lawlor, Thames and Hudson
The Ancient Secret of the Flower of Life by Drunvallo Melchizedek, Light Technology▪

TexMATYC Executive Board

Raja Khoury
President
Collin College
rkhoury@texmatyc.org

Sharon Sledge
President Elect
Northeast Texas CC
sharon.sledge@sjcd.edu

Paula Wilhite
Immediate Past President
Northeast Texas CC
pwilhite@ntcc.edu

Heather Gamber
Secretary, Newsletter Editor
LSC-CyFair
heather.a.gamber@lonestar.edu

Habib Far
Treasurer
LSC-Montgomery
habib.y.far@lonestar.edu

Honey Kirk
AMATYC Delegate
Palo Alto College
hkirk@alamo.edu

Jean Woody
AMATYC Southwest VP
Tulsa Community College
jwoody@tulsacc.edu

Ed Bock
Webmaster
Collin College
ebock@texmatyc.org

Visit us at www.TexMATYC.org

Q: What do you get when you cross a mosquito with a mountain climber?

A: You can't cross a vector with a scalar.

Got News?

If you know of any exciting news in Mathematics, have it published in your TexMATYC newsletter. Submit articles to:
Heather Gamber
heather.a.gamber@lonestar.edu