

AMATYC  
Northwest Regional  
Conference  
2001



April 19 - 21  
Skamania Lodge  
Stevenson, Washington

# NorthWest 2001 Program

Date	Time	Event
<b>Thursday, April 19</b>	5:30 pm—7:30 pm	Registration Publishers' Exhibits
	7:30 pm—8:30 pm	Opening Speaker Dr. Yves Nievergelt <i>Eastern Washington University</i>
	8:30 pm—10:30 pm	Hosted Social
<b>Friday, April 20</b>	7:00 am—8:30 am	Breakfast Buffet
	8:45 am—11:15 am	Publishers' Exhibits
	8:45 am—9:45 am	Session I
	8:45 am—11:15 am	Workshop
	9:45 am—10:15 am	Beverage Break
	10:15 am—11:15 am	Session II
	11:30 am—12:30 pm	Lunch Buffet
	12:30 pm—1:30 pm	Lunch Speaker Dr. Todd Zakrajsek <i>Southern Oregon University</i>
	1:30 pm—4:30 pm	Publishers' Exhibits
	2:00 pm—3:00 pm	Session III
	2:00 pm—4:30 pm	Workshop
	3:00 pm—3:30 pm	Beverage Break
	3:30 pm—4:30 pm	Session IV
6:00 pm—7:00 pm	Dinner Buffet	
7:00 pm—8:00 pm	Keynote Speaker Dr. David Pengelley <i>New Mexico State University</i>	
8:00 pm—10:00 pm	Hosted Social	
<b>Saturday, April 21</b>	7:00 am—8:15 am	Breakfast Buffet
	8:15 am—9:00 am	Combined General Meeting
	9:15 am—11:45 am	Publishers' Exhibits
	9:15 am—10:15 am	Sessions V
	10:15 am—10:45 am	Beverage Break
	10:45 am—11:45 am	Sessions VI
	11:45 am	Checkout and Departure



**STEVENSON BALLROOM**  
**OPENING SESSION—THURSDAY, 7:30—8:30 PM**

*Dr. Yves Nievergelt*  
*Eastern Washington University, WA*

**Why is the Truth Table for Implication so Unintuitive,  
and Other Solved Mysteries in Undergraduate Logic?**

**LUNCH SPEAKER—FRIDAY, 12:30—1:30 PM**

*Dr. Todd Zakrajsek*  
*Southern Oregon University, OR*

**The Scholarship of Teaching in Mathematics**

**KEYNOTE SPEAKER—FRIDAY, 7:00—8:00 PM**

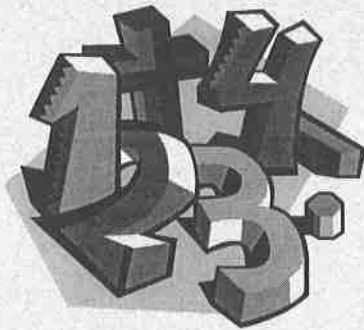
*Dr. David Pengelley*  
*New Mexico State University, NM*

**Voici ce que ja'i trouvé (Here is what I have found):  
Sophie Germain's Rediscovered Work on Fermat's Last Theorem**

**Attention!**

During the Conference there will be a number of commercial presentations conducted by various vendors. For more information regarding the times, rooms, and topics, please consult the announcement board located by the registration desk.

**Note:** These presentations are not sponsored by AMATYC, ORMATYC, or WAMATYC.



# PROGRAM HIGHLIGHTS

Thursday

7:30—8:30 pm

Stevenson Ballroom

## Opening Speaker:

Dr. Yves Nievergelt

Eastern Washington University

## Introduction:

Doug Nelson

Central Oregon CC, OR

Emily Woods

Peninsula College, WA

### Why is the Truth Table for Implication so Unintuitive, and Other Solved Mysteries in Undergraduate Logic?

This talk will answer several questions that remain unanswered in most lower division undergraduate texts on the foundations of logic, mathematics, and computer science, but which arise every time I teach such a course: Why is the truth table for the logical implication the unintuitive way that it is? Why are there no recipes to design proofs? Where do these numerous mathematical rules come from? The perennial question: in what ways are we going to use this material? The discussion will be at the lower division undergraduate level, and will not assume any prerequisite. The answers will reveal that there exist not only one but several logics that adequately reflect “reality” and that can adequately serve as the foundations of mathematics and computer science.

Thursday

8:30—10:30 pm

Hood River Suite (Room 421)

### Hosted Social



Social is hosted by John Bartizal, Dennis Fernandes of **Prentice Hall** and Theresa Bisbal, Kevin Connors, Dwayne Coy, Jennifer Huber, Leah Thomson of **Thomson Learning - Brooks/Cole**

Relax with fellow conference attendees as you enjoy food, beverages, and conversation.

Friday

7:00—8:30 am

Stevenson Ballroom A & B

### Breakfast Buffet

Get your morning off to a good start by enjoying a full breakfast buffet.

**Your Name Tag is your Meal Ticket**



# FRIDAY WORKSHOPS



<b>Friday</b>	<b>8:45—11:15 am</b>	<b>Cascade Locks Ballroom D</b>
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Presenter:	Teri Glaess	Scottsdale CC, AZ	teri.glaess@sccmail.maricopa.edu
Presider:	Brenda Herman	Clackamas CC, OR	

## **Reaching New Heights with Alternate Assessment**

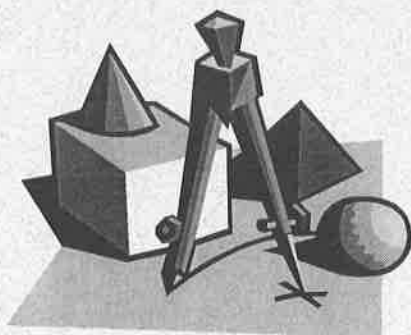
Do you still review the day before the test? Do you want to assign presentations, posters, or projects but don't know how to grade them? How do you assess concepts? Come to this workshop and experience alternate assessment, see student work and create assessment you can use in your class.

<b>Friday</b>	<b>2:00—4:30 pm</b>	<b>Cascade Locks Ballroom D</b>
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Presenter:	AGregg Harbaugh David Buchthal Sharon Saxton	Cascadia CC, WA	agregg@cascadia.ctc.edu
Presider:	Elizabeth O'Neil	Olympic College, WA	

## **Pattern Recognition, Formalization & Manipulation**

A curriculum structured around patterns better prepares students for life beyond the classroom. Introducing our innovative approach, we will discuss instructional strategies, assessment tools, and obstacles encountered to date. Then we will work collaboratively to create strategies and assessments for a topic chosen by consensus by walking it from Pre-algebra to Calculus.



# FRIDAY SESSIONS

**Friday**

**8:45—9:45 am**

**Cascade Locks Ballroom A**

Presenter: Jay Lehmann  
Presider: Rochelle Mitchell

College of San Mateo, CA  
Green River CC, WA

mathnerdjay@aol.com

## **Sex, Drugs, & Rock 'n Roll**

Grab intermediate algebra students' attention with a curve fitting approach where students can model current, compelling, authentic situations. Enhance their understanding of concepts with explorations and conceptual exercises. Come hear "The Number Guy" song and "Top Ten Reasons Why I Should Take a Break from Lecturing". Not for the timid.

**Friday**

**8:45—9:45 am**

**Cascade Locks Ballroom B**

Presenter: Randolph Taylor  
Presider: Ron Mason

Las Positas College, CA  
Linn-Benton CC, OR

rtaylor@clpccd.cc.ca.us

## **Mathematics in Pro Football: The NFL Quarterback Rating System.**

The speaker will look at the mathematics and statistics of current NFL Pro Football Quarterback Rating System and discuss how a question from a student about mathematics in sport led to some interesting results. Come and see how your favorite players stack up and review some mathematics along the way!

**Friday**

**8:45—9:45 am**

**Cascade Locks Ballroom C**

Presenter: Ron Larson  
Presider: Lynn Trimpe

Penn State University, PA  
Linn-Benton CC, OR

odx@psu.edu

## **Calculus Instruction in the U.S. (1950-2001)**

This talk traces the effects of World events on calculus instruction in the United States. Included in the talk is a description of a current development in which Calculus I and Precalculus are being taught as an integrated one-year course.

**Note: This Presentation will be repeated Friday 2:00—3:00 in Cascade Locks Ballroom B**



<b>Friday</b>	<b>8:45—9:45 am</b>	<b>Stevenson Ballroom C</b>
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Presenter:	Wayne Barber	Chemeketa CC, OR	barw@chemeketa.edu
Presider:	Dave Gillette	Chemeketa CC, OR	

### **Tessellations: Using Geometer's Sketchpad to produce tessellations**

Creating Tessellations of the plane using computer technology is relatively easy and lots of fun. In this session, we will explore why some polygons tile the plane and why some polygons can't tile the plane. We will then make modifications to the edges of the polygons that tile the plane to create Escher-like designs.

<b>Friday</b>	<b>8:45—9:45 am</b>	<b>Stevenson Ballroom D</b>
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Presenter:	Andre L. Yandl	Seattle University, WA	alyandl@seattleu.edu
Presider:	Gary Parker	Blue Mountain CC, OR	

### **Reminiscence of an Old, Retiring, Mathematician**

The presenter will discuss results and proofs that he found especially beautiful during his forty-five year career. His criteria for mathematical beauty is for a result, or argument, to be surprising, or clever, but in all cases to be simple enough to be shared with colleagues and interested students.

<b>Friday</b>	<b>8:45—9:45 am</b>	<b>Yurt 1</b>
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### **Discussion Group How Reform Curriculum Works With Developmental Math Students**

Facilitator:	Sue Kuestner	Lake Washington Technical College, WA
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<b>Friday</b>	<b>9:45—10:15 am</b>	<b>Galleria</b>
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### **Beverage Break**

Take a break from meetings this morning and enjoy beverages. Take time during the conference to visit the exhibits in the Conference Center Lobby.

<b>Friday</b>	<b>10:15—11:15 am</b>	<b>Cascade Locks Ballroom A</b>
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Presenter:	Phyllis Leonard Susan Poston	Chemeketa CC, OR	leop@chemeketa.edu
Presider:	Mike Sequeira	Central Oregon CC, OR	

### **An Assessment Strategy**

Chemeketa's mathematics program has begun to assess Math 060 (Elementary Algebra) students using a departmental final exam. Attendees to this presentation will have an opportunity to assess some sample student work according to Chemeketa's performance based learner outcomes and the resulting rubric. Extensions of this assessment strategy to other courses and other campuses will be discussed.

<b>Friday</b>	<b>10:15—11:15 am</b>	<b>Cascade Locks Ballroom B</b>
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Presenter:	Greg Langkamp Joe Hull	Seattle Central CC, WA	glangk@sccd.ctc.edu jhull@sccd.ctc.edu
Presider:	Steve Kerr	Tillamook Bay CC, OR	

### **Integrating Environmental Science and Liberal Arts Math**

Need a real motivator for liberal arts mathematics? At Seattle Central, students learn basic statistics and college algebra by collecting and analyzing data on streams and forests, and examining other real-world physical, geological and biological data sets. Discover how to get started with QELP – the Quantitative Environmental Learning Project.

<b>Friday</b>	<b>10:15—11:15 am</b>	<b>Cascade Locks Ballroom C</b>
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Presenter:	Mario Triola	Dutchess C.C., NY	mftriola@aol.com
Presider:	Monte Cheney	Central Oregon CC, OR	

### **Statistics in the News**

The speaker will describe some applications of statistics related to news stories. Topics include a disputed election, reports of more rainfall on weekends, the effectiveness of touch therapy, power lines and leukemia, and reports of survey results. The level of presentation will be suitable for those who teach statistics as well as those who do not.

**Note: This Presentation will be repeated Friday 2:00—3:00 in Stevenson Ballroom D**

<b>Friday</b>	<b>10:15—11:15 am</b>	<b>Stevenson Ballroom C</b>
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Presenter:	David Gillette	Chemeketa CC, OR	gild@chemeketa.edu
Presider:	Gary Melendy	Peninsula College, WA	

### **Tables and Tables: Using Graphing Calculators to Assist in Factoring Trinomials**

Factoring trinomials using a 3 by 3 table can eliminate the stress of guessing. The tables available on TI graphing calculators can make one of the steps much easier. This presentation will demonstrate the ease of this algorithm. Calculators will be available for teachers of developmental courses to practice on.



**Friday****10:15—11:15 am****Stevenson Ballroom D**

Presenter: Linda Ernst  
 Presider: Mike Woods

Mt Hood CC, OR  
 Peninsula College, WA

ernstl@mhcc.cc.or.us

### **A Math Model for Collaborative Learning Dynamics**

Many of us are familiar with the success that accompanies collaborative learning groups. In fact we have seen statistical evidence that supports the pedagogy. In this presentation, using Nonlinear Dynamical Systems Analysis, we will explore and classify the topological form of a Catastrophe Model that seeks to explain the dynamics of learning and creativity.

**Friday****10:15—11:15 am****Yurt 1**

### **Discussion Group The Appropriate Math Class Placement Dilemma**

Facilitator: Emily Woods

Peninsula College, WA

emilyw@pcadmin.ctc.edu

**Friday****11:30 am—1:30 pm****Stevenson Ballroom**

### **Lunch Buffet**



**Lunch Speaker:**  
**Welcome from AMATYC:**  
**Introduction:**

Dr. Todd Zakrajsek  
 Sadie Bragg  
 Doug Nelson  
 Emily Woods

Southern Oregon University  
 Borough of Manhattan CC  
 Central Oregon CC, OR  
 Peninsula College, WA

### **The Scholarship of Teaching in Mathematics**

In 1990 Boyer called for a “Scholarship of Teaching.” This scholarship, according to Boyer, should be public, susceptible to critical review/evaluation, and be accessible for exchange and use by others. The main point is a simple one. We should look at the practice of teaching with a critical eye, read what others have learned, and share what we learn. Since this “call” by Boyer, essentially every discipline within higher education has participated and contributed to the scholarship of Teaching. Many of the key players in this movement have been from the area of Mathematics. In this presentation I will discuss the concept of the Scholarship of Teaching and share what Mathematicians have contributed to this movement.

**Your Name Tag is your Meal Ticket**

**Friday****2:00—3:00 pm****Cascade Locks Ballroom A**Presenter: Judy de Szoek  
Presenter: Sue NorrisLinn-Benton CC, OR  
Peninsula College, WA

deszoej@gw.lbcc.cc.or.us

**Excel Spreadsheet Activities in a Finite Math Course**

In an effort to make Finite Math for Biological/Management/Social Science more interesting and relevant, the presenter includes hands-on group activities and simulations. Students in this class use features of the Excel spreadsheet, including array operations, the Solver and descriptive statistics. Activities and samples of student work will be shown.

**Friday****2:00—3:00 pm****Cascade Locks Ballroom B**Presenter: Ron Larson  
Presenter: Cathy CurtisPenn State University, PA  
Mt. Hood CC, OR

odx@psu.edu

**Calculus Instruction in the U.S. (1950-2001)**

This talk traces the effects of World events on calculus instruction in the United States. Included in the talk is a description of a current development in which Calculus I and Precalculus are being taught as an integrated one-year course.

**Friday****2:00—3:00 pm****Cascade Locks Ballroom C**Presenters: Philip Moore  
Karen Louise White  
Presenter: Gregg WatermanLane CC, OR  
Oregon Institute of Technology, OR

moorep@lanecc.edu

**Exploring Properties of Mersenne and Fermat Numbers**

Learn about the interesting patterns to be found in the prime factorizations of the numbers which are powers of 2, plus or minus 1. Worksheets will be presented which have introduced LCC math students to these patterns, as well as to our ongoing computer lab project searching for prime factors of Mersenne and Fermat numbers.

**Friday****2:00—3:00 pm****Stevenson Ballroom C**Presenter: Charlie Naffziger  
Presenter: Mike DanielCentral Oregon CC, OR  
Peninsula College, WA

cnaffziger@cocc.edu

**The Strange Case of  $\log_a(x-b) + \log_a(x-c) = d$** 

Students often see interesting patterns in Mathematics that we simply haven't noticed. The presenter will show one of these patterns. This particular pattern yields a ridiculous technique to solving a log equation. The presentation will investigate and the group will determine if the technique is ridiculous or ingenious.

<b>Friday</b>	<b>2:00—3:00 pm</b>	<b>Stevenson Ballroom D</b>
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Presenter:	Mario Triola	Dutchess CC, NY	mftriola@aol.com
Presider:	Barry Bergman	Clackamas CC, OR	

### **Statistics in the News**

The speaker will describe some applications of statistics related to news stories. Topics include a disputed election, reports of more rainfall on weekends, the effectiveness of touch therapy, power lines and leukemia, and reports of survey results. The level of presentation will be suitable for those who teach statistics as well as those who do not.

<b>Friday</b>	<b>2:00—3:00 pm</b>	<b>Yurt 1</b>
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### **Discussion Group Using the TI-89 in Calculus Classes**

Facilitator:	Larry Smith	Peninsula College, WA	larrys@pcadmin.ctc.edu
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<b>Friday</b>	<b>3:00—3:30 pm</b>	<b>Galleria</b>
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### **Beverage Break**

Take a break from meetings this afternoon and enjoy beverages. Take time during the conference to visit the exhibits in the Conference Center Lobby.

<b>Friday</b>	<b>3:30—4:30 pm</b>	<b>Cascade Locks Ballroom A</b>
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Presenter:	Duane DeTemple	Washington State U., WA	detemple@wsu.edu
Presider:	Lynne Sage	Bellevue CC, WA	

### **Investigating Square-Banded Polygons with Geometer's Sketchpad**

Napoleon's Theorem states that if equilateral triangles are erected on the sides of any triangle, then their centers form another equilateral triangle. This idea is taken in a new direction by erecting bands of squares on a polygon. It will be shown how this configuration can be investigated with Geometer's Sketchpad software.



**Friday****3:30—4:30 pm****Stevenson Ballroom C**

Presenter: Dusty Wilson  
Presenter: John Thickett

Western Washington U, WA  
Southern Oregon U, OR

dwwuv@yahoo.com

### **Singular Value Decomposition and its Applications to Image Compression**

Scanned images can be represented as matrices. These matrices are large and unwieldy. In order to compress an image it is necessary to approximate a matrix. The singular value decomposition of a matrix guarantees that every real valued matrix can be broken into the product of orthonormal and diagonal matrices.

**Friday****3:30—4:30 pm****Stevenson Ballroom D**

Presenters: Holli Adams  
Presenters: Jerry Kissick  
Presenter: David Ebert

Portland CC , OR  
Peninsula College, WA

hadams@pcc.edu  
jkissick@pcc.edu

### **Three forms of College Algebra at Portland CC**

To better meet student needs, Portland Community College has split the traditional college algebra course into three versions aimed at meeting the needs of different student populations. This presentation describes the contents of each version and details how these have helped students better meet their varying program requirements.

**Friday****3:30—4:30 pm****Yurt 1**

### **Discussion Group Shaping Upcoming AMATYC Initiatives in Teacher Preparation**

Facilitator: Phil DeMarois

Mt. Hood CC, OR

demaroip@mhcc.cc.or.us



**Friday****3:30—4:30 pm****Cascade Locks Ballroom B**

Presenter: Ben Hill  
Presider: Phyllis Leonard

Lane CC, OR  
Chemeketa CC, OR

hillb@lanecc.edu

### **Is That Your Final Answer? Multiple Draft Projects Help Develop Mathematical Power**

In his introductory algebra courses, the presenter requires students to submit multiple drafts of term projects. Complimenting the brief, discrete exercises that comprise most student output at this level, multiple-draft projects help develop mathematical power while providing an opportunity for students to produce high quality work products.

**Friday****3:30—4:30 pm****Cascade Locks Ballroom C**

Presenter: Doug Mooers  
Presider: Rob Lewis

Whatcom CC, WA  
Linn-Benton CC, OR

dmoors@whatcom.ctc.edu

### **Online Math Center: Food for Mouse**

A free online resource for anyone interested in mathematics. Help sites, professional organizations, current research, puzzles, games, applications. Real data at your fingertips. Information and programs for calculators. Math Library. LiveMath (registered) demonstration files available with a free plug-in download. The site was developed through a Title III grant.

**Friday****3:30—4:30 pm****Stevenson Ballroom A**

Presenter: Daphne Sluys  
Presider: Nancy Clough

Whatcom CC, WA  
Linn-Benton CC, OR

dasmuscle@aol.com

### **Dealing with Math Anxiety**

How the stress response impacts math students. Why it is necessary for anxious, frustrated, emotional students to relax, in order to solve math problems. Easy classroom-friendly ways for faculty and tutors to assist students to overcome frustration and math anxiety.

**Friday****3:30—4:30 pm****Stevenson Ballroom B**


Presenter: Laura Bracken  
Presider: Alice Hayden

Lewis-Clark State College, ID  
Clackamas CC, OR

bracken@lcsc.edu

### **Assessment and the Standards: When is 70% Good Enough?**

The AMATYC Standards state that "students should be held accountable for learning certain basic skills" and also suggest that student proficiency in problem solving, communication, groupwork, and technical reading be assessed. The presentation will discuss alignment of rigorous standards for student achievement with appropriate assessments and performance criteria in developmental mathematics.

Session	Stevenson A	Stevenson B	Stevenson C	Stevenson D
I Friday 8:45—9:45			<i>Tessellations: Using Geometer's Sketchpad to Produce Tessellations</i>  Wayne Barber Chemeketa CC,OR	<i>Reminiscence of an Old, Retiring Mathematician</i>    Andre L. Yandl Seattle U,WA
II Friday 10:15—11:15			<i>Table and Tables: Using Graphing Calculators to Assist in Factoring Trinomials</i>  David Gillette Chemeketa CC,OR	<i>A Math Model for Collaborative Learning Dynamics</i>  Linda Ernst Mt. Hood CC,OR
III Friday 2:00—3:00			<i>The Strange Case of <math>\log(x-b)+\log(x-c)=d</math></i>  Charlie Naffziger Central Oregon CC,OR	<i>Statistics in the News</i>  Mario Triola Dutchess CC,NY
IV Friday 3:30—4:30	<i>Dealing with Math Anxiety</i>  Daphne Sluys Whatcom CC,WA	<i>Assessment and the Standards When is 70% Good Enough?</i> Laura Bracken Lewis-Clark State College, ID	<i>Singular Value Decomposition and its Applications to Image Compression</i> Dusty Wilson Western Washington U,WA	<i>Three Forms of College Algebra at Portland CC</i>  Holli Adams Jerry Kissick Portland CC,OR
V Saturday 9:15—10:15			<i>An Interactive Case Study</i>  David Shellabarger, Bill Griffiths Lane CC,OR	<i>Geometry: Meeting the Standards What, Why, &amp; How?</i>  Catherine Curtis Penny Slingerland Alison Warr Mt. Hood CC,OR
VI Saturday 10:45—11:45	<i>The Construction of Celtic Art</i>  Becky Plassmann Central Oregon CC,OR	<i>Teaching Statistics Using Minitab</i>  Imad Dakka Jeff Parent Oakland CC,MI	<i>Using the CBL in Technical Mathematics</i>  Joan Thomas Lane CC,OR	<i>Using the TI-83 Calculator</i>  Gary Melendy Peninsula College,WA



Yurt 1	Cascade Locks Ballroom A	Cascade Locks Ballroom B	Cascade Locks Ballroom C	Cascade Locks Ballroom D
<p><b>Discussion Group</b> <i>How Reform Curriculum Works With Developmental Math Students</i> Sue Kuestner Lake Wash. Tech. College, WA</p>	<p><i>Sex, Drugs, &amp; Rock 'n Roll</i>  Jay Lehmann College of San Mateo, CA</p>	<p><i>Mathematics in Pro Football NFL Quarterback Rating System</i>  Randolph Taylor Las Positas College, CA</p>	<p><i>Calculus Instruction in the U.S. (1950-2001)</i>  Ron Larson Penn State University, PA</p>	<p><b>WORKSHOP</b> <i>Reaching New Heights with Alternate Assessment</i>  Teri Glaess Scottsdale CC, AZ</p>
<p><b>Discussion Group</b> <i>The Appropriate Math Class Placement Dilemma</i>  Emily Woods Peninsula College, WA</p>	<p><i>An Assessment Strategy</i>  Phyllis Leonard Susan Poston Chemeketa CC, OR</p>	<p><i>Integrating Environmental Science and Liberal Arts Math</i> Greg Langkamp Joe Hull Seattle Central CC, WA</p>	<p><i>Statistics in the News</i>  ✱  Mario Triola Dutchess CC, NY</p>	<p><i>This Workshop will allow you to experience alternate assessment, see student work, and create assessment you can use in your class.</i></p>
<p><b>Discussion Group</b> <i>Using the TI-89 in Calculus Classes</i>  Larry Smith Peninsula College, WA</p>	<p><i>Excel Spreadsheet Activities in a Finite Math Course</i>  Judy de Szoeki Linn-Benton CC, OR</p>	<p><i>Calculus Instruction in the U.S. (1950-2001)</i>  ✱  Ron Larson Penn State University, PA</p>	<p><i>Exploring Properties of Mersenne and Fermat Numbers</i>  Philip Moore Karen Louise White Lane CC, OR</p>	<p><b>WORKSHOP</b> <i>Pattern Recognition, Formalization &amp; Manipulation</i> AGregg Harbaugh David Buchthal Sharon Saxton</p>
<p><b>Discussion Group</b> <i>Shaping Upcoming AMATYC Initiatives in Teacher Preparation</i> Phil DeMarois Mt. Hood CC, OR</p>	<p><i>Investigating Square-Banded Polygons with Geometer's Sketchpad</i>  Duane DeTemple Washington State University, WA</p>	<p><i>Is That Your Final Answer? Multiple Draft Projects Help Develop Mathematical Power</i> Ben Hill Lane CC, OR</p>	<p><i>Online Math Center: Food for Mouse</i>  Doug Mooers Whatcom CC, WA</p>	<p>Cascadia CC, WA  <i>Instructional strategies, assessment, and obstacles in a curriculum structured around patterns.</i></p>
<p><b>Discussion Group</b> <i>MathExcel, TIPS, MathFit</i>  Lynn Trimpe Linn-Benton CC, OR Charlie Naffziger Central Oregon CC, OR</p>	<p><i>Results from Portland CC's Math Reform Project</i>  Ilga Ross Portland CC, OR</p>	<p><i>Finding Good Jobs; Recruiting Good Teachers</i> Alice Kaseberg Stefan Baratto Louise Hoover Benedict Nmah Lane CC, OR</p>	<p><i>Mathemania: Using Games to get Students Excited About Math</i>  Frank Wilson Green River CC, WA</p>	<p><i>Trig Functions from a Graphical Point of View</i>  Marjie Vittum-Jones South Seattle CC, WA</p>
	<p><i>Successes in Developmental Mathematics</i>  Michael Woods Peninsula College, WA</p>	<p><i>An Alternative Approach to Intermediate Algebra</i>  Helen Burn Highline CC, WA</p>	<p><i>On-Line Homework and Exams in Math and the Sciences</i>  John L. Orr University of Nebraska, NE</p>	<p><i>Frivolous Fun with Elementary Algebra</i>  Gregg Waterman Oregon Institute of Technology, OR</p>

Friday

6:00—8:00 pm

Stevenson Ballroom

## Dinner Buffet And Keynote Speaker



**Keynote Speaker:**

Dr. David Pengelley

New Mexico State University

**Introduction:**

Doug Nelson

Central Oregon CC, OR

Emily Woods

Peninsula College, WA

### Voici ce que ja'i trouvé (Here is what I have found): Sophie Germain's Rediscovered Work on Fermat's Last Theorem

Legendre's Théorie des Nombres, credits her with what is known today as Sophie Germain's Theorem, the first general result toward a proof of Fermat's Last Theorem. It is generally assumed that she was the junior partner in a collaboration with Legendre. However, a reevaluation of her manuscripts and correspondence indicates otherwise. Not only did she develop the general version of her theorem independently, but she also deserves credit for substantial additional work previously attributed to Legendre, namely the beginnings of an algorithm for applying her theorem to various exponents. After almost two centuries, generalizations of her approach still remain central to contemporary advances in proving Case I of Fermat's Last Theorem.

### Your Name Tag is your Meal Ticket

Friday

8:00—10:00 pm

Hood River Suite (Room 421)

## Hosted Social



Social is hosted by Jon Haufe, Sherri Levine, Van Strength of **Harcourt College Publishers** and Lynn Cox, Alan Gainer, Keiran Moloney, Gertrud Otzen, Jack Shira, Kent Watson of **Houghton Mifflin**

Relax with fellow conference attendees as you enjoy food, beverages, and conversation.

Saturday

7:00—8:15 am

Stevenson Ballroom

## Breakfast Buffet

Get your morning off to a good start by enjoying a full breakfast buffet.

Your Name Tag is your Meal Ticket



Saturday

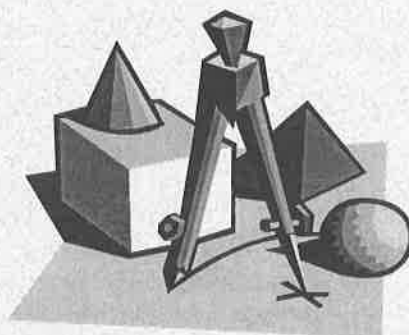
8:15—9:00 am

Stevenson Ballroom



## Combined General Meeting

# SATURDAY SESSIONS



<b>Saturday</b>	<b>9:15—10:15 am</b>	<b>Cascade Locks Ballroom A</b>
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Presenter:	Ilga Ross	Portland CC, OR	iross@pcc.edu
Presenter:	Phil DeMarois	Mt. Hood CC, OR	

## Results from Portland CC's Math Reform Project

Portland CC just concluded a five-year, system-wide mathematics reform project to increase student success and retention. Features of the project reflecting the AMATYC "Standards" will be presented, along with how an evaluation plan was developed, ways that data were collected, and the statistical results of the project.

<b>Saturday</b>	<b>9:15—10:15 am</b>	<b>Cascades Locks Ballroom B</b>
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Presenters:	Alice Kaseberg	Lane CC, OR	kaseberg@compuserve.com
	StefanS Barratto		
	Louise Hoover		
	Benedict Nmah		
Presenter:	Washington Community College Faculty		

## Finding Good Jobs; Recruiting Good Teachers

Can we take advantage of the rising number of job openings to promote the changes advocated by AMATYC and others? Join recently hired instructors and experienced screening committee members to address what might be shared with graduate students and adjunct or part-time instructors to improve the quality of applicants and their skill in writing a successful application.

<b>Saturday</b>	<b>9:15—10:15 am</b>	<b>Cascades Locks Ballroom C</b>
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Presenter:	Frank Wilson	Green River CC, WA	fwilson@grcc.ctc.edu
Presenter:	Mike Daniel	Peninsula College, WA	

## Mathemania: Using Games to get Students Excited about Math

Do your students cheer and laugh during your math classes? Do they act excited when asked to work a challenging math problem under a short deadline? Come experience Mathemania, a computer-based game that will enliven your classroom and energize your students.



<b>Saturday</b>	<b>9:15—10:15 am</b>	<b>Cascades Locks Ballroom D</b>
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Presenter:	Marjie Vittum-Jones	South Seattle CC, WA	nvjones@sccd.ctc.edu
Presenter:	Sharon Rodecap	Linn-Benton CC, OR	

### **Trig functions from a graphical point of view**

By first introducing the graphical definition of all six trig functions, basic trigonometric relationships are easily developed. Using PowerPoint helps ease the transition from the definitions to the graphs of each function. In addition, PowerPoint makes the instructor's drawings look much more visually appealing than free-hand drawings. Handouts provided.

<b>Saturday</b>	<b>9:15—10:15 am</b>	<b>Stevenson Ballroom C</b>
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Presenters:	David Shellabarger	Lane CC, OR	shellabargerd@lanecc.edu
	Bill Griffiths		griffithsb@lanecc.edu
Presenter:	Sue Norris	Peninsula College, WA	

### **An Interactive Case Study**

This session will be for people to experiment with a computer simulation of industrial applications of statistics and evaluate it from the instructor / student viewpoint. Participants will leave with a multimedia activity appropriate for college transfer and technical courses having a statistical component. Computers provided if needed.

<b>Saturday</b>	<b>9:15—10:15 am</b>	<b>Stevenson Ballroom D</b>
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Presenters:	Catherine Curtis	Mt Hood CC, OR	curtisc@mhcc.cc.or.us
	Penny Slingerland		slingerp@mhcc.cc.or.us
	Alison Warr		warra@mhcc.cc.or.us
Presenter:	Washington Community College Faculty		

### **Geometry: Meeting the Standards – What, Why, and How?**

This session is designed for those interested in geometry at the pre-collegiate level. Curriculum issues, instructional emphases, pedagogy, and desired student outcomes will be discussed and modeled through activities. The presenters will share and distribute examples of geometry problems they created. These are not your mother's geometry problems.

<b>Saturday</b>	<b>9:15—10:15 am</b>	<b>Yurt 1</b>
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### **Discussion Group MathExcel, TIPS, MathFit**

Facilitators:	Lynn Trimpe	Linn-Benton CC, OR	trimpel@gw.lbcc.cc.or.us
	Charlie Naffziger	Central Oregon CC, OR	cnaffziger@cocc.edu



<b>Saturday</b>	<b>10:15—10:45 am</b>	<b>Galleria</b>
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### **Beverage Break**

Take a break from meetings this morning and enjoy beverages. Take time during the conference to visit the exhibits in the Conference Center Lobby.

<b>Saturday</b>	<b>10:45—11:45 am</b>	<b>Cascades Locks Ballroom A</b>
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Presenter:	Michael Woods	Peninsula College, WA	michaelw@pcadmin.ctc.edu
Presenter:	Wini Benvenuti	Mt. Hood CC, OR	

### **Successes in Developmental Mathematics**

By requiring 100% mastery of critical basic skills, the presenter has achieved good results in two developmental math courses. Student reactions have been surprisingly favorable. The presenter will describe the strategies and note issues, challenges, and outcome data.

<b>Saturday</b>	<b>10:45—11:45 am</b>	<b>Cascades Locks Ballroom B</b>
-----------------	-----------------------	----------------------------------

Presenter:	Helen Burn	Highline CC, WA	hburn@hcc.ctc.edu
Presenter:	Washington Community College Faculty		

### **An Alternative Approach to Intermediate Algebra: Wonderful or Watered Down? Dynamic or Damaging?**

Math 95 is an alternative approach to intermediate algebra at Highline College, designed for the student heading into Liberal Arts math or Symbolic Logic. Spreadsheets, real data and writing-across-the-curriculum are incorporated, with attention paid to basic numeracy such as percent change and interpreting graphs. Please come to hear about this controversial (?) course and share your opinions and ideas.

<b>Saturday</b>	<b>10:45—11:45 am</b>	<b>Cascades Locks Ballroom C</b>
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Presenter:	John L. Orr	University of Nebraska – Lincoln, NE	jorr@math.unl.edu
Presenter:	Larry Smith	Peninsula College, WA	

### **On-Line Homework and Exams in Math and the Sciences**

The presentation will describe experiences at the University of Nebraska using web-based software to deliver homework, tutorials, and high-stakes “gateway” exams. This approach enables mastery-learning approaches to teaching core skills in large-enrollment classes. The report will describe the pedagogical uses of this software, and provide a demonstration of the software in action.

<b>Saturday</b>	<b>10:45—11:45 am</b>	<b>Cascade Locks Ballroom D</b>
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Presenter: Gregg Waterman                      Oregon Institute of Technology, OR                      watermag@oit.edu  
Presider: Washington Community College Faculty

### **Frivolous Fun with Elementary Algebra**

What constitutes mathematical research? Is it the exclusive domain of the “Ivory Tower Researchers,” or is it accessible to all? A case will be made for the latter by examining two questions arising from elementary algebra.

<b>Saturday</b>	<b>10:45—11:45 am</b>	<b>Stevenson Ballroom A</b>
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Presenter: Becky Plassmann                      Central Oregon CC, OR                      rplassmann@cocc.edu  
Presider: Beverly Parnell                      Yakima Valley CC, WA

### **The Construction of Celtic Art**

The Celtic peoples of Britain developed one of the world’s great geometric arts. Celtic art features immensely intricate knots, spirals, and key designs. How were they made? We’ll be looking at classic examples of Celtic art, including illustrations from the Book of Kells, and learning to construct our own designs.

<b>Saturday</b>	<b>10:45—11:45 am</b>	<b>Stevenson Ballroom B</b>
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Presenter: Imad Dakka                      Oakland CC, MI                      IADakka@occ.cc.mi.us  
                    Jeff Parent  
Presider: Washington Community College Faculty

### **Teaching Statistics using Minitab**

The presentation will show how instructors can incorporate Minitab into a statistics class. It will share some statistics worksheets and assignments on each subject in elementary statistics, for students and instructors to use inside a computer-equipped classroom. The lecture will demonstrate how to make concepts of statistics easier using Minitab.





**Saturday**

**10:45—11:45 am**

**Stevenson Ballroom C**

Presenter: Joan Thomas  
Presenter: Bob Hillenbrand

Lane CC, OR  
Blue Mountain CC, OR

thomasjm@lanecc.edu

### **Using the CBL in Technical Mathematics**

A hands-on presentation introducing you to the CBL in Technical Math (Pre-calculus level). Attendees will leave with two or more activities they can use in their classroom. Please bring your own TI-83 or TI-83 Plus. Activities will be worked on in groups. There will be time for individual questions.

**Saturday**

**10:45—11:45 am**

**Stevenson Ballroom D**

Presenter: Gary Melendy  
Presenter: Washington Community College Faculty

Peninsula College, WA

gmelendy@olympus.net

### **Using the TI-83 Calculator**

The presenter will demonstrate a number of programs he has written to fill needs in the two-year college curriculum, usually inspired from his own classroom experiences and from suggested topics given by fellow teachers. The presenter will demonstrate how these programs can be used in the classroom. Copies of all the programs will be made available to those attendees who are interested.



## **Checkout and Departure**



# 2001 EXHIBITORS

## **Academic Systems**

Penny Rosner

## **Addison Wesley Longman Publishing Company**

Colleen Jones, Peter Harris, Dave Shea, Amy Teeling, Julie Tylman

## **Harcourt College Publishers**

Jon Haufe, Sherri Levine, Van Strength

*Co-host for Friday evening's social*

## **Houghton Mifflin**

Lynn Cox, Alan Gainer, Keiran Moloney, Gertrud Otzen, Jack Shira, Kent Watson

*Co-host for Friday evening's social*

## **Prentice Hall**

John Bartizal, Dennis Fernandes

*Co-host for Thursday evening's social*

## **TDL.COM**

Cliff Speakman

## **Texas Instruments**

Ellen Johnston

## **Thinkwell.com**

Kimberly Travis

## **Thomson Learning - Brooks/Cole**

Theresa Bisbal, Kevin Connors, Dwayne Coy, Jennifer Huber, Leah Thomson

*Co-host for Thursday evening's social*

## **WCB/McGraw-Hill**

Kris Osmus

## **WH Freeman**

Bill Davis

## **Wiley**

Carl Beers, Lisa Lockwood, Bill May

# CONFERENCE COMMITTEE



## Conference Sub-committees:

<b>Registration:</b>	Sue Norris Kimbra Reader Judy de Szoeka	Peninsula College Peninsula College Linn-Benton CC
<b>Program:</b>	Emily Woods Doug Nelson	Peninsula College Central Oregon CC
<b>Facilities:</b>	Theo Montgomery	Linn-Benton CC
<b>Exhibitors:</b>	Dale Hoffman Frank Goulard	Bellevue CC Portland CC
<b>Registration Packet:</b>	Mike Daniel David Ebert Gary Melendy Mike Woods	Peninsula College Peninsula College Peninsula College Peninsula College
<b>Program Booklet:</b>	Mike Sequeira	Central Oregon CC
<b>Website:</b>	Larry Smith Theo Montgomery	Peninsula College Linn-Benton CC

## COMING EVENTS

### AMATYC 27th Annual Conference

November 15—18, 2001

Toronto, Canada

### ORMATYC Conference

April 25—27, 2002

Inn at Spanish Head, Lincoln City Oregon

### Washington State Community Colleges Mathematics Conference and Retreat

Hosted by Clark College, 2002



## Washington State Community Colleges Mathematics Conference

The first Washington State Community Colleges Mathematics Conference and Retreat was held in 1969. The organizers were Phil Heft, Jim Relf, Larry Larson, and John Van Duff. We are told that the per person cost at the time was \$16.68 and that 33 people attended the conference. It was held at "The Lodge" at Ashford where accommodations required sleeping bags. The menu for the first banquet as well as the name of the first guest speaker remain unsolved mysteries. Today's Retreats, usually referred to as Spring Math Conferences, involve more than 200 mathematicians from both two- and four-year colleges. There are usually a few invited talks, but the bulk of the program is contributed by inspired volunteers. Responsibility for conference planning is passed among the 34 Washington community colleges. There's no particular formula for who hosts when; and there's no set location where the meetings are held. As if by magic, volunteers appear (usually a few years in advance) and destination meeting sites are found in the Cascade Mountain corridor, on the Olympic Peninsula, or in the Columbia Gorge. There is a traveling fund, the Washington State Math Conference Foundation, that helps the host institution with start-up costs.

Year	Conference Host Schools	Location of Conference
1969	Green River/Highline/Ft. Steilacoom CC's	The Lodge
1970	Spokane Falls CC	The Lodge
1971	Everett CC	Snoqualmie Pass
1972	Everett CC	Snoqualmie Pass
1973	Seattle Central CC	Snoqualmie Pass
1974	Green River CC	Lake Wilderness
1975	Highline CC	Providence Heights
1976	Bellevue CC	Snoqualmie Pass
1977	Shoreline CC	Providence Heights
1978	Edmonds CC	Providence Heights
1979	Olympic College	Port Ludlow
1980	Spokane Falls CC	Sun Mountain
1981	Spokane Falls CC	Sun Mountain
1982	Highline CC	Lake Chelan
1983	Olympic College	Port Ludlow
1984	Green River CC	Alderbrook
1985	Shoreline CC	Sun Mountain
1986	North Seattle CC	Alderbrook
1987	Lower Columbia CC	Alderbrook
1988	Olympic College	Port Ludlow
1989	Bellevue CC	Lake Chelan
1990	Clark College	Alderbrook
1991	Pierce College and Tacoma CC	Lake Chelan
1992	Yakima CC	Yakima
1993	Highline CC	Wenatchee
1994	South Seattle CC	Silverdale
1995	Skagit Valley and Whatcom CC	Wenatchee
1996	Spokane Falls CC and ORMATYC	Skamania Lodge
1997	Green River CC	Campbell's Resort in Chelan
1998	Tacoma CC and Big Bend CC	Lake Chelan
1999	Edmonds CC	Ocean Shores
2000	Bellevue CC	Wenatchee
2001	Peninsula College and ORMATYC	Skamania Lodge
2002	Clark CC	To Be Determined

### Washington Mathematical Association of Two-Year Colleges

The Washington Mathematical Association of Two-Year Colleges (**WAMATYC**) was formed in Yakima in 1985-86. The Past and current presidents are Barbara Poole (1986-87), Chuck Ainsley (1988-90), Phil Heft (1990-92), Mike Greenwood (1992-94), Paul Casillas (1994-98), Dale Hoffman (1998-2000), Emily Woods (2000-present).

**WAMATYC** meetings are held during the Washington Community College Mathematics Conference in the spring of each year. The organization recognizes the Washington college which places highest each year in the AMATYC Student Mathematics League Contest with \$50 for student awards. **WAMATYC** has a web site created and maintained by Sally Keely of Clark College. The site has links to many useful sites as well as a current job announcement board and a distribution list for one-click emailing to **WAMATYC** campus representatives. A feature coming soon is the math directory online. This directory lists the faculty, courses taught, and textbooks used at each community college in the state.

## Oregon Mathematical Association of Two-Year Colleges

The Oregon Mathematical Association of Two-Year Colleges (**ORMATYC**) is a non-profit education association and an affiliate of the American Mathematical Association of Two-Year Colleges (**AMATYC**). Its purposes are to:

- Encourage the development of effective mathematics programs
- Afford a state forum for interchange of ideas
- Further develop and improve the mathematics education and the mathematics-related experience of students in two-year colleges
- Promote the professional welfare and development of its members
- Afford a forum for input at the state level concerning mathematics education.

The organization was unofficially formed in the fall of 1986 at the impetus of the late James Streeter of Clackamas Community College. The first conference was held at the Inn at Spanish Head in May, 1987. At the business meeting there, the constitution was presented, revised, and adopted. Arrangements were made for the nomination and election of officers and thus **ORMATYC** was official. Since then **ORMATYC** has sponsored twelve more spring conferences. The fall of 1991 saw the first newsletter for the organization. The newsletter is currently published twice a year in the fall and spring. This year **ORMATYC** joins for the second time with the two-year colleges in the state of Washington to sponsor a joint conference at Skamania Lodge in Stevenson, Washington.

### ORMATYC Presidents

James Streeter	1987-1988	Wally Waldman	1994-1995
Roger Judd	1988-1989	Tom Reimer	1995-1996
Mary Ellen White	1989-1990	Don Hutchison	1996-1997
Dorothy Beaufait	1990-1991	Frank Goulard	1997-1998
Dick Clark	1991-1992	Lynn Trimpe	1998-1999
Dick Holliday	1992-1993	Marveen McCready	1999-2000
Gary Grimes	1993-1994	Doug Nelson	1999-2001

### ORMATYC Executive Board

<i><b>Past-President</b></i>	Doug Nelson	Central Oregon CC
<i><b>President</b></i>	Doug Nelson	Central Oregon CC
<i><b>President-Elect</b></i>	Dennis Kimzey	Rogue CC
<i><b>Secretary</b></i>	Sharon Rodecap	Linn-Benton CC
<i><b>Treasurer</b></i>	Judy de Szoeko	Linn-Benton CC
<i><b>Technology Support</b></i>	Theo Montgomery	Linn-Benton CC

### ORMATYC Special Assignments

<i><b>Historian</b></i>	Alice Hayden	Clackamas CC
<i><b>Newsletter Editor</b></i>	Mike Sequeira	Central Oregon CC

# NOTES





MEMBERSHIP APPLICATION: The American Mathematical Association of Two-Year Colleges  
 MAIL TO: AMATYC OFFICE, c/o State Technical Institute at Memphis, 5983 Macon Cove, Memphis, TN 38134  
 Phone: (901) 383-4643 Fax: (901) 383-4651 Email: amatyc@stlm.tec.tn.us Web Site: http://www.amatyc.org

\_\_\_\_\_  
 First Name Middle Initial Last Name Position

\_\_\_\_\_  
 College

\_\_\_\_\_  
 College Address Phone Email

\_\_\_\_\_  
 City State Zip

\_\_\_\_\_  
 Residence Address Phone

\_\_\_\_\_  
 City State Zip

Indicate preferred mailing address:  College  Residence

- Check here if you wish your name to be excluded from the AMATYC Directory.  
 Check here if you wish your name to be excluded from any non-AMATYC mailing lists.

All payments in U.S. funds payable to AMATYC  
 Membership Fee: All memberships include *The AMATYC Review* and *The AMATYC News*.

- \$50 Yearly Individual Membership (any person interested in two-year college mathematics)  
 \$10 Yearly Associate Membership (full-time student, non-voting member)  
 Name of AMATYC sponsor \_\_\_\_\_  
 \$1,000 Life Membership NOTE: Institutional Membership information available upon request.

Special Membership Categories: (Full-time math faculty excluded) Special Membership categories DO NOT include receiving the *AMATYC Review*, membership drive information, voting rights, or eligibility for AMATYC office.

- \$25 Yearly Retired Membership  \$25 Yearly Adjunct Faculty

In addition, the following journals are available for an additional charge:

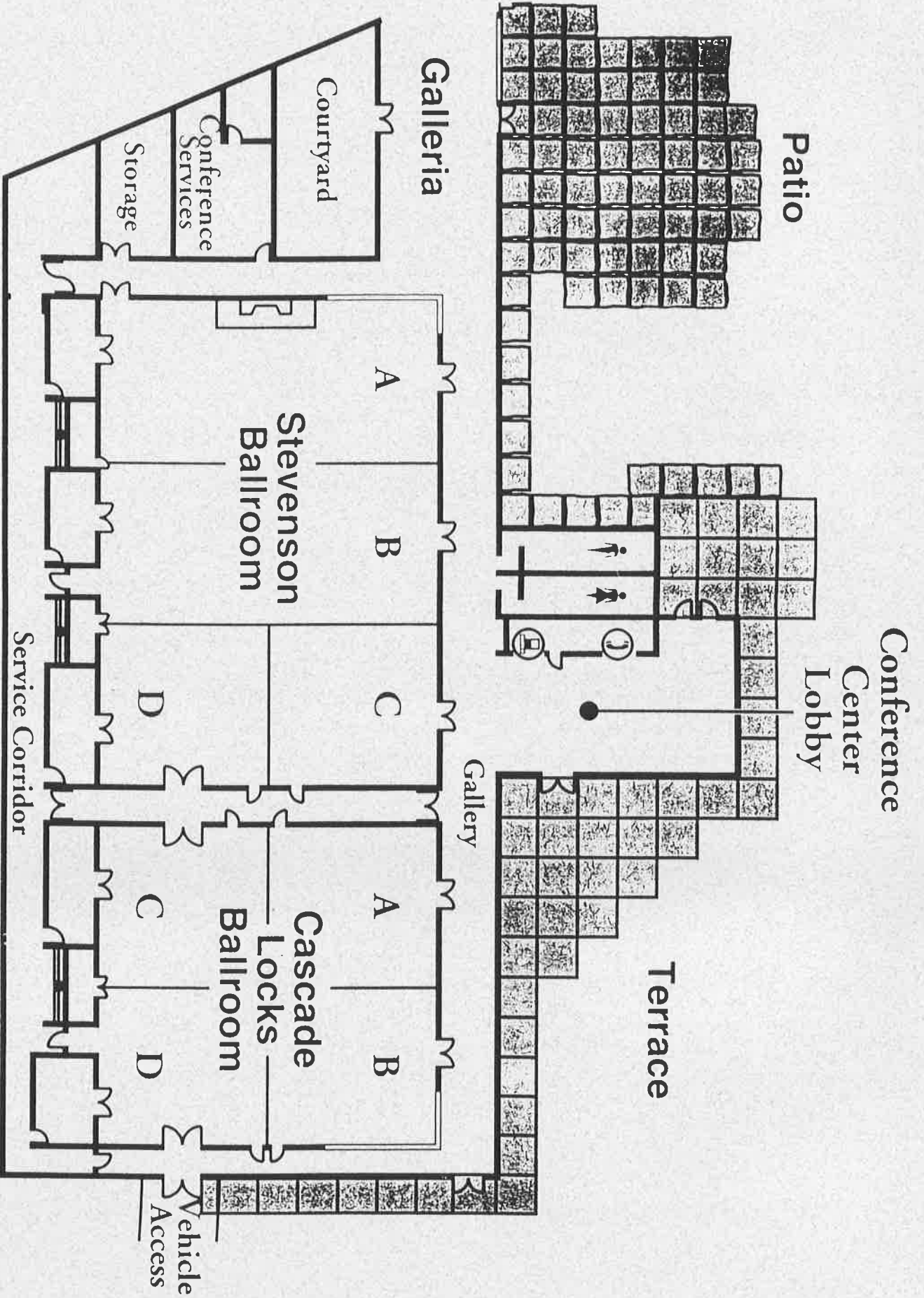
- Mathematics and Computer Education* \$24 for 3 Issues  
 *The College Mathematics Journal* \$45 for 5 Issues  
 *PRIMUS* (Problems, Resources, and Issues in Mathematics Undergraduate Studies) \$30 for 4 Issues

Total Amount Enclosed \$ \_\_\_\_\_ Check # \_\_\_\_\_

Visa  MasterCard  Discover  
 Credit Card # \_\_\_\_\_ Signature \_\_\_\_\_  
 Exp. Date \_\_\_\_\_

OPTIONAL DEMOGRAPHIC INFORMATION (Please check one in each category):

- |  |  |   |
|--|--|---|
| <p><b>CATEGORY 1</b></p> <p><input type="checkbox"/> African American</p> <p><input type="checkbox"/> American Indian/<br/>Alaskan Native</p> <p><input type="checkbox"/> Asian</p> <p><input type="checkbox"/> Hispanic</p> <p><input type="checkbox"/> White, not Hispanic</p> <p><input type="checkbox"/> Other, please specify _____</p> | <p><b>CATEGORY 2</b></p> <p><input type="checkbox"/> Female</p> <p><input type="checkbox"/> Male</p> | <p><b>CATEGORY 3</b></p> <p><input type="checkbox"/> Two-Year College</p> <p><input type="checkbox"/> Four-Year College</p> <p><input type="checkbox"/> Other, please specify _____</p> |
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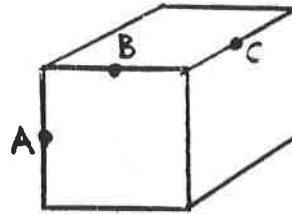


# Conference Puzzle Page

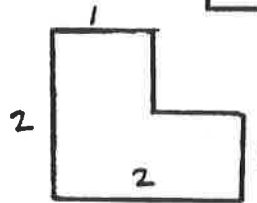
*All puzzle solutions must be in prior to the Friday evening reception. Solutions must be organized and readable. Awards will be made during breakfast on Saturday morning, prizes being awarded on the basis of the number of correct solutions, ties to be broken by a drawing.*

1. Say how to arrange the spades of a deck of cards so that when they are turned face down in a pile
  - a. The top card is the ace, which is turned over and laid face up on the table; then
  - b. The next card is moved from the top of the pile and placed on the bottom, still face down; the next card after that is turned face up and placed on the ace, and is the deuce; then
  - c. The next two cards are moved to the bottom of the deck, and the next card after that is turned up, laid on the deuce, and is the three.
  - d. The pattern is continued; three, four, then five, etc., cards are moved from top to bottom before turning the next card up, until only one card, the king, remains. When it is turned face up and laid on the pile on the table, the order in which the cards emerged was A, 2, 3, 4, 5, 6, 7, 8, 9, 10, J, Q, K.

2. A, B, C are midpoints of the edges of a cube, as shown. Could a clever high school student, who knew nothing of vectors, find angle ABC? If so, how?



3. Dissect this region into four regions that are similar to it?

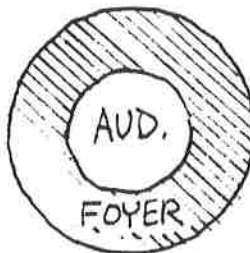


4. Is there anything weird about this sword and sheath?

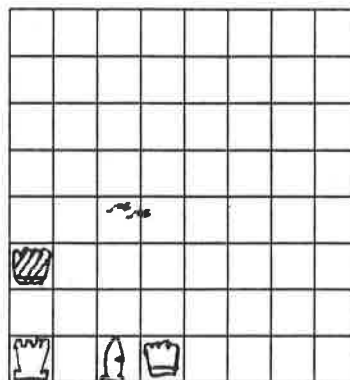


If a sword has a constant cross section, name three shapes it could have and still fit into a sheath of the same cross section.

5. Your carpet company is going to bid on carpet for the foyer that surrounds a circular auditorium, as shown. Your assistant goes to the site to take measurements, and he reports back that the longest chord for the outer circle that doesn't penetrate the inner circle is 60 yards. What additional measurement must he go back and get so that you can calculate the area to be carpeted?



6. You come across an abandoned chess game with the pieces placed as shown. Was it actually within the rules of chess to have gotten into this position? If so, how?



:black king



:white king



:white rook

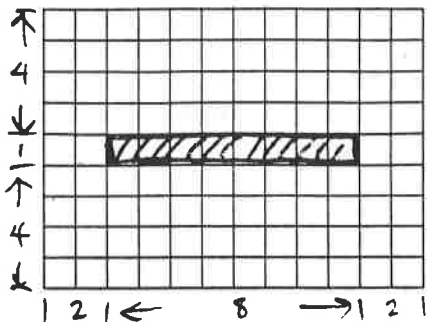


:white bishop



7. Simplify  $\sqrt{3 - \sqrt{5}} + \sqrt{4 + \sqrt{7}} + \sqrt{6 - \sqrt{35}}$ . Show your steps.

8. A  $1 \times 8$  rectangle has been cut out of the center of a  $9 \times 12$  rectangle, as shown. Cut the remainder of the  $9 \times 12$  rectangle into two pieces that fit together to form a square.



9. Try the following routine on a cheap calculator which can only add, subtract, multiply, divide, take square root, and store (STO) and recall (RCL) one number. Let  $P$  be any positive number.

1. STO  $P$ .
2. Enter "1" in the x register.
3. Press this sequence of keys: X, RCL,  $\sqrt{\quad}$ ,  $\sqrt{\quad}$ .
4. Write the result of step 3.
5. Go to step 3.

As you see, this procedure creates an infinite sequence. Does this sequence converge? If so, to what number? Prove that you are correct? Is it possible to get  $\sqrt[14]{P}$  from this calculator?

10. Tom, Dick and Harry are rock stars. One of them plays guitar, another piano, the third plays drums. Find out which is which, given that:

- a. The drummer tried to hire the guitarist for a recording session, but was told that the guitarist was out of town doing shows with the pianist.
- b. The pianist earns more money than the drummer.
- c. Harry earns less than Dick.
- d. Harry has never heard of Dick.

11.  $n$  married couples attend a dance party. For one dance, men are paired with women randomly by drawing names from a hat. What is  $P(n)$ , the probability that none of the women is paired with her husband, for  $n = 5, 6, 7, 8$ ?

## Washington List of Participants by College

College	First Name	Last Name	Phone	E-mail
<b>Austin CC</b>				
	Irene	Doo	(512) 371-1902	idoo@austin.cc.tx.us
<b>Bellevue CC</b>				
	Andria	Villines	(425) 564-4025	avilline@bcc.ctc.edu
	Caroline	Shook	(425) 564-5601	cshook@bcc.ctc.edu
	Dale	Hoffman	(425) 564-2791	lsage@bcc.ctc.edu
	Jennifer	Laveglia	(425) 564-2204	jlavegli@bcc.ctc.edu
	Joyce	Lee	(425) 564-5602	jlee@bcc.ctc.edu
	Larry	Curnutt	(425) 564-2412	lcurnutt@bcc.ctc.edu
	Lynne	Sage	(425) 564-2471	lsage@bcc.ctc.edu
	Marilynn	Tober	(425) 885-5674	mtober@bcc.ctc.edu
	Pete	Bloomsburg	(425) 564-4031	pbloomsb@bcc.ctc.edu
	Peter	Ratener	(425) 564-2380	pratener@bcc.ctc.edu
	Rose	Pugh	(425) 564-2796	rpugh@bcc.ctc.edu
	Sasha	Malinsky		smalinks@bcc.ctc.edu
	Susan	Gronlund		sgronlun@bcc.ctc.edu
	Tom	Pugh	(425) 564-2796	rpugh@bcc.ctc.edu
	Tony	Akhlaghi		takhlagh@bcc.ctc.edu
<b>Big Bend CC</b>				
	Anita	Hughes	(509) 762-6239	anitah@bbcc.ctc.edu
	Barbara	Whitney	(509) 762-5351	barbaraw@bbcc.ctc.edu
	Brinn	Harberts	(509) 762-6346	brinnh@bbcc.ctc.edu
	Donna	Brown	(509) 762-6302	donnab@bbcc.ctc.edu
	Jim	Hamm	(509) 762-6349	jimh@bbcc.ctc.edu
	Kathleen	Duvall	(509) 762-6346	kathleen@bbcc.ctc.edu
	Sonia	Farag	(509) 762-6371	anitah@bbcc.ctc.edu
	Stephen	Lane	(509) 762-6264	stephenl@bbcc.ctc.edu
<b>Cascadia CC</b>				
	A. Gregg	Harbaugh		agregg@cascadia.ctc.e
	Dave	Buchthal	(425) 788-1234	dbuchthal@cascadia.ct
	Sharon	Saxton		
<b>Clark College</b>				
	Dale	Hoover	(360) 992-2363	lhoover@clark.edu
	Dennis	Watson	(360) 992-2310	dwatson@clark.edu
	Jim	McGlothlin	(503) 246-3479	jmcmclothlin@clark.edu
	Kathy	McLean	(360) 576-9781	mkcmclean@juno.com
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# **CANCELLATIONS!!**

The following sessions have been cancelled. Please make note of it.  
Thank you!!!

Friday 3:30-4:30

Stevenson B Assessment and the Standards: When is 70% Good Enough?  
Laura Bracken

Saturday 10:45- 11:45

Stevenson C: Using the CBL in Technical Mathematics  
Joan Thomas