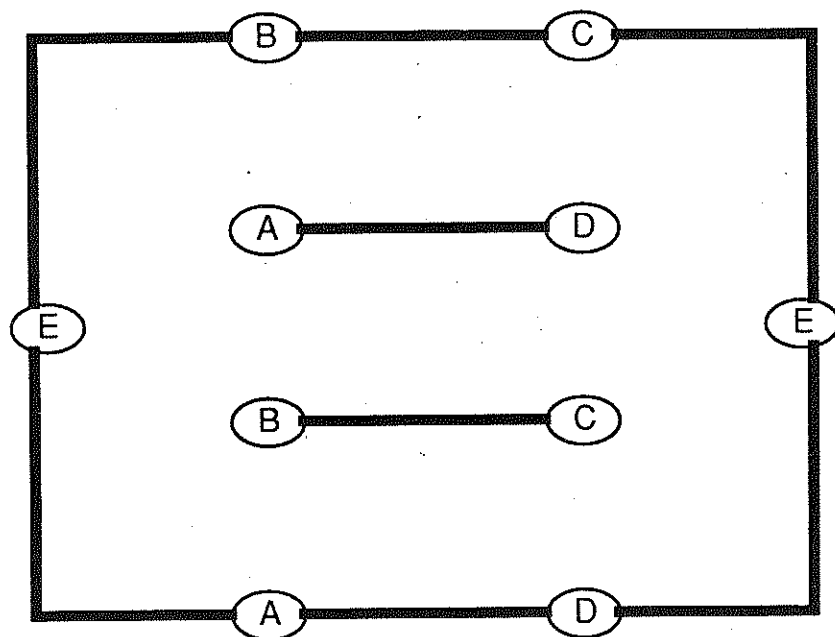DEVISING PLANAR GRAPHS IS AN ESSENTIAL TASK IN MANY FIELDS OF TECHNOLOGY. PRINTED CIRCUITS WILL SHORT CIRCUIT, FOR EXAMPLE, IF ANY TWO PATHS CROSS.

TRY THIS PRINTED CIRCUIT PROBLEM:

DRAW FIVE NONINTERSECTING LINES WITHIN THE RECTANGLE, EACH CONNECTING A PAIR OF CIRCLES WITH THE SAME LETTER (A WITH A, B WITH B, ETC.). THE TWO LINES AD AND BC MAY NOT BE CROSSED.

WASHINGTON COMMMUNITY COLLEGE MATHEMATICS CONFERENCE

APRIL 24-25, 1987

ALDERBROOK RESORT

HOSTED BY LOWER COLUMBIA COLLEGE

Hosted by Lower Columbia College

FRIDAY, APRIL 24, 1987

	EASTWOOD	HAMMA HAMMA	LOFT
2:30	Larry Curnutt	Jerine Ridgway	Richard Brian
3:30	Bruce Ransom	Mike Greenwood	Dennis Watson

4:10   Information Sharing, Eastwood Room
Panel of Faculty from 4-year colleges and universities (30 min.)
Use of computers (30 min.)

5:10   Register and check into rooms

6:00   Social Hour

7:00   Dinner

Guest Speaker: **Joseph Roberts, Reed College**
"What is Irrational?   Some Aspects of Mathematics"

SATURDAY, APRIL 25, 1987

7:45   Breakfast Buffet

	EASTWOOD	HAMMA HAMMA	LOFT
9:00	Frank Edge	Yves Nievergelt	Dan Fitzsimmons
10:00	Victor Keiser	Andre Yandl	Phil Heft
11:15	Duane DeTemple	Ernest Roetman	Phil Green

12:00   Check out and lunch

WAMATYC meeting following lunch in the HAMMA HAMMA Room.

Note: Coffee will be served Saturday at 10:30 a.m.

FRIDAY PRESENTATIONS

For All Practical Purposes:
A Video Based Liberal Arts Course

Larry Curnutt
Bellevue Community College

Eastwood Room
Friday, 2:30 p.m.

Description of BCC's attempt at an alternative to 105 that satisfies the University of Washington quantitative reasoning requirements or science distribution requirement. One 25 minute video tape will be shown. (Others can be made available for viewing.)

Try Teaching in Another Country

Jerine Ridgway
South Seattle Community College

Hamma Hamma
Friday, 2:30 p.m.

An exchange teaching experience in Australia---how, what I learned and what I would change NEXT TIME.

Mathematics and Science for Adult Learners

Richard Brian
Evergreen State

Loft
Friday, 2:30 p.m.

The life experiences of older students can be a springboard for a new understanding of mathematics and science in their surrounding world.

Indeterminate Forms and "Historical Proofs"

Brian Ransom
Clark College

Eastwood Room
Friday, 3:30 p.m.

A quick review of indeterminate forms (found in different mathematical environments) and a look at "historical proofs" that $(o)(\infty)$ is indeterminant. Arithmetic illustrations of the forms ∞/∞, $(\infty-\infty)$, $(0)(\infty)$, ∞ , 0 and the general l'Hopital's Rule will be provided.

A Circle with Two Centers?

Mike Greenwood
Clark College

Hamma Hamma
Friday, 3:30 p.m.

An alternative definition of a circle (different from "all points equidistant from some given point") will be discussed.

The Fifth Root Of
$909,203,700,718,879,776 = ?$

Dennis Watson
Clark College

Loft
Friday, 3:30 p.m.

The algorithm for finding square roots is generalized to roots of any order.

Information Sharing

Eastwood Room

4:10 Panel: Tom Read, Western Washington University
Michael J. Kallaher, Washington State University
Yves Nievergelt, Eastern Washington University
Andre Yandl, Seattle University

4:40 Use of Computers

SATURDAY PRESENTATIONS

Kepler, Astrology and the Bethlehem Star

Frank Edge   Eastwood
South Puget Sound Community College   Saturday, 9:00 a.m.

One piece of work by Kepler, "the last scientific astrologer", greatly influnced both the history of science and our modern interpretation of ancient mythology. The place where mathematics and mythology meet.

What Do You Teach Now That The Kids Have The HP-28C?

Yves Nievergelt   .Hamma Hamma Room
Eastern Washington University   Saturday, 9:00 a.m.

The new HP-28C hand-held calculator can do standard algebra and calculus and it may pass your standard examinations! Do we stop teaching calculus? Do we now focus on the theory and leave routine manipulations to the calculator? Do we focus on "modeling"? I shall present some classroom experiments and request your opinion for quotes in a monthly article on the HP-28C.

Statistical Quality Control

Dan Fitzsimmons   Loft
Cogswell College North   Saturday, 9:00 a.m.

Statistical methods for improvement of business processes have played a key role in the domination of many markets by the Japanese and other foreign businesses. A knowledge of statistics plays a key role in the complete community college curriculum. This presentation will include specific statistical tools and examples of their importance.

SATURDAY PRESENTATIONS

Fun with Binomial Coefficient

Victor Keiser   Eastwood Room
Whitman College   Saturday, 10:00 a.m.

There seems to be an endless variety of striking formulas relating sums, products and quotients of binomial coefficients. A number of these are derived very easily by some clever techniques using simple differential and integral calculus.

On Tabular Integration

Andre Yandl   Hamma Hamma Room
Seattle University   Saturday, 10:00 a.m.

Tabular integration is discussed briefly in the Riddle and Thomas texts. The method applies to integrals of the form $\int f(x)g(x)dx$ where $f(x)$ is a polynominal of degree n and $g(x)$ can be antidifferentiated easily (n-1) times. However, it is restricted to these types of integrals. In the talk, we generalize the method so that it can be applied to many types of integrals.

Spherical Trigonometry

Phil Heft   Loft
Green River College   Saturday, 10:00 a.m.

The main formulas of spherical trigonometry will be derived using vectors. A couple simple applications will be given.

Getting Your Fair Share

Duane W. DeTemple   Eastwood Room
Washington State University   Saturday, 11:15 a.m.

Problems from group ranking, dividing a piece of cake and apportioning a legislature will be used to illustrate the mathematics of fair division. Participants will receive classroom ready materials produced under a recently concluded project funded by NSF.

Electromagnetism as a Mathematical Science

Ernest Roetman   Hamma Hamma Room
Cogswell College North   Saturday, 11:15 a.m.

A study of the relationship between the development of mathematics and our understanding of electromagnetic phenomena.

Even a Computer Can Solve a System of Linear Equations...Sometimes!

Phil Green   Loft
Western Washington University   Saturday, 11:15 a.m.

A talk about when iteration methods for solving systems of linear equations work and when they do not. The order in which the equations are listed makes a difference.

NOTES

Bellevue Community College
Marilyn Anderson
Carolann Castell
Larry Curnutt
Cathy Curnutt
Dale Hoffman
G. Peter Hould
Marilynn Druck
Nil Molvik
Jim Relf
Judy Relf
Lynne Sage
Caroline Shook
Roberta M. Wheatley

Big Bend Community College
Tom Bennett

Central Washington University
Alla Ditta R. Choudary
Bill Eberly
Ken Gamon
Wafa Yazigi

Clark Community College
Louise Dyson
Mike Greenwood
Wes Orser
Bruce Ransom
Dennis Watson

Columbia Basin College
Rick Hilliard
Trueman D. Tucker
Barbara Whitney

Eastern Washington University
Yves Nievergelt

Edmonds Community College
Monica Bergman
Barbara Maly

Everett Community College
Joyce Mansfield
Nancy Wadlington

Grays Harbor College
Harry Beeler

Green River Community College
Donald Alexander
David Bender
Don Hallstone
Philip Heft

Highline Community College
Ron Burke
Richard Davis
Ron Engstron
Karen Frank
Ruth A. Hendricks
Brian Hogan
Rita M. Kochhar
Ed Newell
Richard Plagge
Allan Walton
Elmar Zemgalis

Lower Columbia College
Robert Carson
Dorothy M. Crepin
Carol Flakus
Bill Fuller
Diane Fuller
Lenore Vest

North Seattle Community College
Barbara Dyer
Earl W. Hamilton
Dave Mitchell
Barbara Poole
Vicky Ringen
Robert Tighe
Harry Watts

Olympic College
Mike Dodge
Martin Haines
Carson Hollingsworth
Glenlee James
Leo Macky
Scott Niven
Jerad Zimmermann

Peninsula Community College
Kent Brauninger
Rosemary Brauninger
Marjorie Lindberg

Portland Community College
Dick Clark

St. Martin's College
Joe Mailhot

Seattle University
Mary Ehlers
Wynne Guy
Janet Mills
Ahmad Mirbagheri
Andre Yandl

Shoreline Community College
Helen Hancock
Betty Hawkins
Mark Parker
Judy Sanderman

Skagit Valley Community College
Howard Anderson
Dick Huffman
Susan Indorf

South Seattle Community College
Larry Vittum-Jones
Marjorie Vittum-Jones
Margie Lane
Stephen Lane
Frank Post
Michelle Post
Jerine Ridgway
Sarah Sanchez

Spokane Community College
Robert Branch

Spokane Falls Community College
Charles Ainley
Susan Dimich
Kialynn Glubrecht
Robert L. Hamilton
Barbara Harris
Gus Harris
Curtiss Humphrey
Gary Isham
Larry Neises
Nick Nickoloff
Gail Nord
Lynn Stockman

Tacoma Community College
Karen Clark
Joe Betz

Washington State University
Duane W. DeTemple
Michael J. Kallaher
Tyre Newton
Eleanor Newton

Wenatchee Valley College
Bruce Baguley
John Murio

Western Washington University
James Duemmel
Phil Green
Susan Blondell Kaplan
Norm Lindquist
Rose Pugh
Thomas Read
John Reay
Betty Ann Reay
Donna Fields Rochon

Whatcom Community College
Doug Mooers

Yakima Valley Community College
Ibrahim Ayyoub
Aziz Jubran
Roger Knobel
Ellena Knobel