February 11, 1988

Dear Colleagues and Friends:

This year's Washington Community College Mathematics Conference will be held at The Resort at Port Ludlow (near Hood Canal) on April 28-30. Since these conferences often seem to end too soon, this year we are scheduling the conference to start Thursday evening (the 28th) and to finish Saturday after lunch (the 30th). In order to accomodate those who want to come on Friday, but to still keep arrangements fairly simple, there will be two options available:

Plan A: hospitality gathering Thursday evening (wine, beer, hors d'oeuvres); breakfast, lunch, and dinner Friday; breakfast and lunch Saturday; accomodations Thursday and Friday nights.

Plan B: dinner Friday; breakfast and lunch Saturday; accomodations Friday night.

Of course, we hope many or most of you will opt for Plan A. Depending on your response, we plan to schedule talks/discussions (approximately) from 10:00 to 12:30 and from 2:00 to 4:30 on Friday, and from 9:00 to 11:30 on Saturday, with coffee or soft drink breaks in the middle of each of these three sessions.

This announcement contains both a call for talks/discussions/workshops, and also a registration form so that you can make early reservations (a great idea) if you wish. There will be another mailing in early March with a list of most speakers and topics, and another registration form. The deadline for sending the registration form and payment is March 20th.

Please call me at 478-4624 or Leo Maki at 478-4539 if you have any questions or suggestions. See you at Port Ludlow!

Scott Niven

Scott Niven

WASHINGTON COMMUNITY COLLEGE MATHEMATICS CONFERENCE

The Resort at Port Ludlow (near Hood Canal)

April 28-30, 1988

The program for this year's conference is almost complete, and includes presentations on Friday morning and afternoon, and on Saturday morning. The schedule of speakers and topics to date is as follows.

SCHEDULE

Thursday, April 28

5:00-7:00   Registration

7:00-10:00   Hospitality gathering (wine, beer, and hors d'oeuvres)

Friday, April 29

9:30-10:00   Registration and check into rooms.

10:00-12:30   Morning Session

The 17-gon	Larry Larson Green River Community College
Spiral Tilings	Marc A. Ness Western Washington University

1:30-2:00   Registration

2:00-4:30   Afternoon Session

Hidden Treasures in the Euclidean Algorithm	Mike Dodge Olympic College
Generation and Use of Infinite Series	Ken Gamon Central Washington University
Mathematical Word Processing for Under $100	Stephen Lane Big Bend Community College
One Faculty Exchange to Australia	Jerine Ridgway South Seattle Community College

4:30-6:00   Registration and check into rooms.

6:00   No-host Cocktail Hour

7:00   Banquet Dinner and

Invited Address: Which Came First: the Nature of Mathematics or the
                   Mathematics of Nature?
                   Millie Johnson, Western Washington University

Following this talk there will be the usual informal get together in two adjoining suites. Other recreational activities are possible; the resort has a heated indoor pool, a jacuzzi, and saunas.

<u>Saturday, April 30</u>

9:00-11:30   <u>Morning Session</u>

Exceptional Exotic Experiences of "e"	Dorothy M. Crepin Lower Columbia College
Working Efficiently in Trig Substitutions	Martin Haines Olympic College
Mathematical Humor	Susan Indorf Skagit Valley College
Diffusion of Stock Prices, the Curriculum, and the HP-28	Yves Nievergelt Eastern Washington University
Written Assignments in Math?	Marjie Vittum-Jones South Seattle Community College

1:00   WAMATYC meeting following lunch.

It is not too late if you would like to contribute to the program; we encourage you to send the title and a short summary of your presentation to Scott Niven (478-4624 or SCAN 356-4624).

THE RESORT AT PORT LUDLOW is approximately 8 miles northwest of the Hood Canal floating bridge (no toll), and about 20 miles south of Port Townsend. You can easily find the Resort: follow the signs to Port Ludlow and the Resort after crossing the Hood Canal Bridge. The spacious grounds of the Resort are located on a secluded inlet of the Puget Sound. Conference facilities include an indoor heated pool, jacuzzi, saunas, a squash court, tennis courts, and a championship golf course.

As described in the previous letter, there are two registration options available:

<u>Plan A</u>: hospitality gathering Thursday evening (wine, beer, hors d'oeuvres); breakfast, lunch and dinner Friday; breakfast and lunch Saturday; accomodations Thursday and Friday nights.

<u>Plan B</u>: dinner Friday; breakfast and lunch Saturday; accomodations Friday night.

PLEASE SEND your registration form and check payable to Washington Math Conference NO LATER THAN MARCH 24, to Leo Maki (478-4539 or SCAN 356-4539). Please call Scott Niven or Leo Maki if you have any questions or suggestions.

We look forward to seeing you at the conference and hope that many of you will choose to come on Thursday evening.

Registration Form

WASHINGTON COMMUNITY COLLEGE MATHEMATICS CONFERENCE

The Resort at Port Ludlow

April 28-30, 1988

NAME_____

SCHOOL_____

HOME PHONE_____ WORK PHONE_____

ADDRESS_____

_____

_____

Please check <u>one</u> of the blanks below:

	<u>Plan A</u> (two nights)	<u>Plan B</u> (one night)
<u>Double Occupancy</u>*		
Room with two twin beds	____($141 per person)	____($79 per person)
Room with one queen bed	____($141 per person)	____($79 per person)
<u>Single Occupancy</u>		
Room with one queen bed	____($206)	____($112)

*Person with whom you are sharing room_____

If you have not specified a roommate, do you smoke? ____Yes ____No

Are you ____Male ____Female

Please mail this form and a check payable to Washington Math Conference by <u>MARCH 24,</u>
to:

LEO MAKI
OLYMPIC COLLEGE
16th AND CHESTER
BREMERTON, WA 98310-1699

WASHINGTON COMMUNITY COLLEGE MATHEMATICS CONFERENCE

The Resort at Port Ludlow (near Hood Canal)

April 28-30, 1988

CONFERENCE SCHEDULE

THURSDAY PM

5-7:00	Registration and Check-in - Lobby
7-10:00	Hospitality Gathering Suites 303/304

FRIDAY AM

9-10:00	Breakfast - Beach Club - Bayview Room and Registration (9:30 Lobby)
10-12:30	Morning Session

FRIDAY PM

12:30-2	Lunch - Beach Club Bayview Room and Registration (1:30 Lobby)

FRIDAY PM

2-4:30	Afternoon Session
4:30-6	Registration and Check-in - Lobby
6-7:00	No-host Cocktail Hour Beach Club - Cove Room
7-9:00	Banquet Dinner and Invited Address Beach Club - Bayview Room
9:15-	Informal Get-together - Suites 303/304

SATURDAY AM

8-9:00	Breakfast - Beach Club - Bayview Room
9-11:30	Morning Session
11:30-12	Check-out
12-1:00	Lunch - Beach Club Bayview Room
1:00	WAMATYC Meeting - Conference Center

INVITED ADDRESS: Which Came First: The Nature of Mathematics or the Mathematics of Nature?

Millie Johnson, Western Washington University

ABSTRACTS OF PRESENTATIONS:

Friday Morning

The 17-gon (LARRY LARSON) Gauss' solution to the 17-gon will be presented. The mathematics is accessible to students knowing DeMoivre's Theorem.

Spiral Tilings (MARC A. NESS) Tilings that form a spiral pattern are visually striking but mathematically hard to pin down. After a general, but brief, statement of definitions and examples of ordinary tilings several methods for generating spiral tilings will be shown. An attempt at a precise definition of spirals along with the attendant problems will also be shown.

Friday Afternoon

One Faculty Exchange to Australia (JERINE RIDGWAY) This will be a discussion of my faculty exchange, what it involved, what was gained (or lost) by the experience and some helpful hints on preparing for such an adventure.

Steradians and Billboards (DON HALLSTONE, DIANA HINMAN, LAURA MOORE-MUELLER) A discussion of the measure of solid angles (in steradians) and its application to finding the best place to view a billboard along a highway. This is an extension of the two-dimensional problem in most calculus texts. (Note: this is based on an article by A. Tan in *Mathematical Spectrum*).

Articulation: The Catchall of Confusion (DICK J. CLARK) The state of Oregon has funded grants for the development of "2 + 2" vocational programs between the high schools and community colleges. This has led to some interesting developments for our college and math department.

Hidden Treasures in the Euclidean Algorithm (MIKE DODGE) Using the technique of algorithm analysis from computer science, a constructive proof of a theorem about Diophantine equations will be derived from the Euclidean algorithm. Other related results will be shown.

Generation and Use of Infinite Series (KEN GROON) The talk discusses generating infinite series through the use of summation formulas and the application of series to solving boundary value problems.

Math and Scientific Word Processing for under $90 (GILLIAN LANE) A short presentation of the Chi-writer scientific word processing program. A very versatile and inexpensive software package for the IBM PC and compatibles costing under $90. This program should be considered a must for every math/science department.

Comments on Teaching Calculus in the New Century (RICHARD HUNT) Computer algebra systems should shift the emphasis from mechanics to understanding concepts, numerical methods, approximation and error analysis. Specific examples will be discussed.

Saturday Morning (first session)

Written Assignments in Math? (MARJIE VITUM-JONES) My talk will be a discussion of the several different kinds of written assignments I have given to various math classes. The success, failure; pros, and cons of each type of project will be presented. Interviews with mathematicians, a topical paper, and journals are among the projects. Bring along your written requirements and expectations to share.

Math Labs: What Works and What Doesn't? (DOUG MOORS) A forum in which math lab instructors will share successful and unsuccessful math lab strategies. Topics to include: VCR taped lectures, computer managed instruction, mastery-competency based materials, peer-tutoring, testing and grading practices, textbooks vs workbooks, and other pertinent topics.

Fold-up Spheres and Pop-up Hyperboloids (CORY B. SMITH) This talk will discuss models and geometric-trigonometric topics inspired by Thomas and Finney's Calculus and Analytic Geometry problems: fold-up containers, with comparison of area $\sqrt{3}/2$/volume ratios, hyperboloid of revolution (1-sheet) for trig identities.

Dynamics of the Inverted V (DONALD R. CHALICE) The largest subset of the line invariant under the "inverted V" is shown to be the Cantor set. Along the way we study the periodic points and their orbits. A point whose orbit is dense is presented.

SCHEDULE OF PRESENTATIONS April 29-30, 1988

FRIDAY	ROOM A (Conference Center)	ROOM B (Conference Center)	ROOM C (Conference Center)	CHART ROOM (near Lobby)
10:00-10:55				
11:00-11:30	-------	Spiral Tilings MARC NESS (WWU)	BREAK -------	
11:30-12:25	One Faculty Exchange to Australia JERINE RIDGWAY (So. Seattle C.C.)	Steradians and Billboards D. HALLSTONE, D. HINMAN, L. MOORE-MUELLER (Green River C.C.)		The 17-gon LARRY LARSON (Green River C.C.)
12:30-2:00	LUNCH			
2:00-2:55	Articulation: The Catchall of Confusion DICK CLARK (Portland C.C.)			Math & Scientific Word Processing for Under $90 STEPHEN LANE (Big Bend C.C.)
3:00-3:30	BREAK			
3:30-3:55	Hidden Treasures in the Euclidean Algorithm MIKE DODGE (Olympic C.C.)	Generation and Use of Infinite Series KEN GAMON (CWU)		
4:00-4:25				

SATURDAY	ROOM A (Conference Center)	ROOM B (Conference Center)	ROOM C (Conference Center)	CHART ROOM (near Lobby)
9:00-9:25	Written Assignments in Math?	Fold-up Spheres and Pop-up Hyperboloids CORY SMITH (Bellevue C.C.)	Math Labs: What Works and What Doesn't? DOUG MOOERS (Whatcom C.C.)	Dynamics of the Inverted V DONALD CHALICE (WWU)
9:30-9:55	MARJIE VITULM-JONES (So. Seattle C.C.)	Comments on Teaching Calculus in the New Century RICHARD HUNT (Purdue University)	Mathematical Humor SUSAN INDORF (Skagit Valley C.C.)	
10:00-10:30	BREAK			
10:30-10:55	Diffusion of Stock Prices, the Curriculum, and the HP-28 YVES NIEVERGELT (EWU)	Exceptional Exotic Experiences of "e" DOROTHY CREPIN (Lower Columbia C.C.)	Statistical Process Control STEVEN KIRSCH (No. Seattle C.C.)	Working Efficiently in Trig Substitution MARTIN HAINES (Olympic C.C.)
11:00-11:25			Changes in the Math Curriculum at the University of Washington CASPAR CURJEL (U of W)	Mathematical Humor MARTIN HAINES (Olympic C.C.)

ABSTRACTS OF PRESENTATIONS, Continued

Mathematical Humor (SUSAN INDORF) The content of the presentation includes excerpts from a collection of cartoons, jokes, poetry, and classroom experiences involving humor. (Presented at the NCTM 1987 Annual Meeting).

Saturday Morning (second session)

Diffusion of Stock Prices, the Curriculum, and the HP-28 (YVES NIEVERGELT) Diffusion processes occur in engineering (heat), medicine (drugs) and the stock market (Black and Scholes model). Fitting equations to data may require non-linear least-squares regression, a subject that draws from the entire undergraduate curriculum (calculus, linear algebra, probability, etc.). Instructors and students may focus on theory and applications while the HP-28 does the work.

Exceptional Exotic Experiences of "e" (DOROTHY CREPIN) Some historical facts about "e", some interesting properties of "e", and a variety of applications involving "e".

Statistical Process Control (STEPHEN KIRSCH) Importance of using statistical tools in the manufacturing and office environments to improve the quality of processes and/or products.

Working Efficiently in Trig Substitutions (MARTIN HAINES) The talk will be very elementary, having evolved directly from the calculus classroom. I will present a few examples, designed to: (a) illustrate for students how to work efficiently and correctly (b) point out the advantage of defining the inverse secant in quadrants I and III (c) resolve (efficiently and correctly) "all the hassels with the signs," whether your text uses inverse secant in quadrants I and III, or I and II.

Changes in the Math Curriculum at the University of Washington (CASPAR CURJEL) Parts of the first year calculus sequence and several of the second year courses will be changed. The changes will be explained and questions from the audience will be answered.