President’s Message
Scott Powell, 2010 – 2011 HCTM President

Aloha Math Educators!

It is that time of year when we all are counting the days. It is that time of year when we have so many things to do, and the time is very short. Summer time is calling and for some of us that means time away to relax. For others it means a time to get that needed training or finish that project that we have just not been able to get to or read that book we have been meaning to read.

This is a great time to reflect on the year. What went right? What could be improved? How could I do things differently? All very good questions and there is plenty of time during the summer to reflect on those questions. Are there certain concepts that are difficult to teach and difficult to learn? How did you teach them this past year? Was it successful? Could I do things differently next year? If I could do it differently how would I do that?

Another type of reflection is about our classroom practice. Are we getting the kinds of classroom discourse that is so important? What could we do to get more discourse? How can we use this opportunity to improve our practice? I am going to spend some time this summer thinking through some of the issues that I have had and try to figure out a way to improve my teaching. This reflection is so vital to what we do as teachers and how we can always be moving forward and improving.

So I ask you, what areas would you like to change? How are you planning to change those areas and how will you know if it worked? There is one thing that I know and that is that the Hawaii Council of Teachers of Mathematics can help you by providing good, quality professional development. Let us know what the needs are or get involve by presenting something that you found effective.

Thanks for all you do and have a great summer.

Scott
Calendar of noteworthy events:

MaTCH - Math Teachers' Circle Hawaii  
June 1-4, 2011  
University of Hawaii

TI-Nspire Technology Institute – Beginner’s Course  
June 15 – 17, 2011

Summer Institute for Teachers & Their Students Using the Graphing Calculator as a Tool  
July 11 – 15, 2011  
Kailua High School

TI-Nspire Technology Institute – Intermediate Course  
July 18 – 20, 2011

AP Summer Institute  
July 25 – 29, 2011  
Punahou School

Fall Conference for Elementary and Middle School Math  
September 24, 2011  
Kamehameha Schools

Secondary Teachers mini-conference  
October 15, 2011  
Roosevelt High

Have another event you think others in our community would like to know about?  
Feel free to submit interesting websites and articles as well!  
Email egabriel@sacredhearts.org

NCTM supports HCTM  
Kim Slagel, NCTM Representative

Join or renew your membership to the National Council of Teachers of Mathematics (NCTM) and help out HCTM at the same time! For each new membership, NCTM will give HCTM $5 or $3 for each annual renewal membership. Simply go online to nctm.org and register as an affiliate member. Be sure to indicate HCTM as your affiliate.

Oahu Mathematics League Calendar for 2011-2012

September 17, 2011  
October 22, 2011

November 19, 2011  
January 14, 2012

February 11, 2012  
March 3, 2012

April 14, 2012

If your high school is interested in joining the Oahu Mathematics League, please contact Lance Suzuki at lancesuzuki.oml@gmail.com. More information on the league can also be found at http://www.oahumath.org/.

HCTM Membership Renewal Reminder  
Deborah Kula, Membership Chair

HCTM memberships for a given school year expire on Aug. 31. Please consider renewing your membership before the hectic beginning of another school year. You may renew membership online (go to http://hctm.org and select the Membership Information link) so you won’t miss any of the exciting upcoming HCTM opportunities.

If you have chosen to receive your newsletter by mail, the membership expiration date is printed on the address label on this newsletter. Email renewal notices will be sent in late July to those members who have selected email newsletter delivery. If you are receiving your newsletter via email and are not sure about your membership expiration date, just send me an email (dkula@sacredhearts.org) and I will verify the date for you. Aloha and have a great summer!
Don’t Throw it AWAY – fREeCYCLE It!

Are your classroom closets filled with last year’s textbooks or hands-on manipulatives from a course you no longer teach? Can’t bring your self to throw them away but can’t spare the space to store them? No problem. Recycle them! Post them on the fREeCYCLE webpage and let someone else use them.

Here’s how it works. If you have useable items that you’d like to donate, contact Kimlynne Slagel (kislagel@ksbe.edu) with the description of what you’d like to donate (i.e. textbooks, furniture, equipment, etc..) number of pieces, your name and contact information. She’ll post them on the fREeCYCLE link of the HCTM website, hctm.org. Interested parties will contact you directly to make arrangements for the exchange. Once the donated items have been adopted, contact Kim so she can remove the posting from the website. It’s easy, it’s free and best of all it gives a new life to educational materials you’ve outgrown.

The results are in!!!

Jason A. Franks, Elections Coordinator, Kamehameha Schools

After 120 votes were cast in our online vote, we have a new HCTM Executive Board for SY11-12. Congratulations to the winners and thank you for your dedication to the children of Hawaii in raising the standards of mathematics education.

The HCTM Board for SY11-12:

President—Scott Powell (King David Kalakaua Middle School)

Vice President—David Furuto (Brigham Young University Hawaii)

Vice President Elect—Conference Chair—Sean Moroney (St. Andrew’s Priory School)

Secretary—Michael Ida (Kalani High School)

Treasurer—Rachael Colman (Maryknoll High School)

High School Director—Laura-Ann Nagata (Roosevelt High School)

2yr College Director—Jean Okumura (Windward Community College)

4yr College Director—Linda Furuto (University of Hawaii–West Oahu)

Membership Director—Deborah Kula (Sacred Hearts Academy)

Thank you to those who participated in the voting process. This was the most participation we’ve had in an election. Great job members!!!

The MathCounts Honolulu Chapter Competition was held on Saturday, February 19 at Punahou’s Case Middle School with 29 school teams (each with 4 students) and 125 individuals competing. The top seven schools from this competition that proceeded to the state competition were:

1. Washington Middle School  
2. Punahou  
3. Highlands Intermediate School  
4. Iolani  
5. Kaimuki Middle School  
6. Kawanakoa Middle School  
7. Moanalua Middle School

At the end of the written portion of the competition, the following individuals took top honors:

1. Ethan Vo – Washington Middle School  
2. Jedediah Johnson – Punahou School  
3. David Chang – Washington Middle School  
4. Clifton Miyamoto - Highlands Intermediate School  
5. EJ Kim – Punahou School

The MathCounts Hawaii State Competition was held on Saturday, March 5 at Iolani School. Besides the Oahu schools listed above, the outer islands schools participating were Waiakea Intermediate School (Big Island) and Seabury Hall (Maui).

Individuals who were high scorers from the chapter competitions also participated in the state competition. They included Ikaika Renaud and Pono Puu-Robinson from Kamehameha-Maui, Sivan Najita from Parker School (Big Island), Michael Chen from Punahou and Kylan Sakata from Waiakea Intermediate School (Big Island).

The top three schools from the State competition were:

1. Washington Middle School – Oahu  
2. Highlands Intermediate – Oahu  
3. Punahou – Oahu

The top four individuals based on the written and oral portions of the State competition were:

1. Ethan Vo – Washington Middle School  
2. David Chang – Washington Middle School  
3. Julius Balagso – Highlands Intermediate School  
4. Junhao Li - Waiakea

These 4 mathletes will represent the state of Hawaii in the 2011 Raytheon MathCounts National Competition that will be held on May 5 – 8, 2011 in Washington D.C. The coach for this Hawaii team is Mr. Sung Park from Washington Middle School.

Congratulations to all the winners and good luck to the Hawaii team when they compete in the MathCounts National Competition!
The auspicious State Math Bowl XXXIII or the 33rd Annual State Mathematics Championships were held on May 07, 2011, Saturday on the Island of Oahu at Brigham Young University Hawaii. The Math Bowl is a team competition, where the best high schools in the State are invited to compete in a small school division and a large school division to determine the best high schools in mathematics in Hawaii.

The Governor, Neil Abercrombie, has promulgated a State Proclamation of Mathematics Awareness Week in Hawaii which culminates with the State Math Championships or Math Bowl. Further, the Mayor has also promulgated a County Proclamation of Mathematics Awareness Week in Hawaii which culminates with the State Math Championships or Math Bowl.

In addition to the Math Bowl which is a team championship, three major contests affiliated with individual math competitions are conducted: AMC 8, AMC 10, AMC 12 (AMC is the acronym for American Mathematics Competitions, where top individual scorers can qualify to represent the USA at the International Mathematical Olympiad (IMO), which is a World Championship Mathematics Competition for High School students and is held annually in a different country. The AMC is the oldest (began in 1950) and most prestigious individual mathematics competition for high school students. The State Director of the AMC Competitions is Dr. David M. Furuto of Brigham Young University Hawaii.

The purposes of this State Math Bowl and the American Mathematics Competitions are to stimulate interest in the learning of mathematics through mathematical challenges, which may be likened to creating enthusiasm in sports through athletic contests. This Math Bowl is the only Statewide Math Contest where all public and private high schools are invited to compete as teams rather than as individuals. The goals of the State Math Bowl and the American Mathematics Competitions are: 1. To promote the teaching and learning of mathematics; 2. To give outstanding math students the opportunity to compete with one another in solving challenging problems; 3. To promote good-will and understanding through mathematics among the schools and students of Hawaii; 4. To stimulate interest in and create enthusiasm for the learning of mathematics through friendly competition.

STATE INDIVIDUAL CHAMPIONS:
In the individual competitions assessed through the American Mathematics Competitions (AMC) for the State of Hawaii, Hawaii's top math students as determined by the national contests called the AMC 8, AMC 10 and AMC 12, which do culminate in the International Mathematical Olympiad (IMO), the following students should be recognized as individual champions for the 2010-2011 school year.

For the 2010-2011 school year, the State Individual Champions are respectively:

- The Hawaii State Individual Champion for Grades 6-8 is:
  - Jasmine Doan, 8th grade, at Seabury Hall In Makawao, Maui;
- The Hawaii State Individual Champions for Grades 9-10 is:
  - Zhengyuan Ma, 10th grade, from Punahou; and
- The Hawaii State Individual Champion for Grades 11-12 is:
  - Richard Chang, 12th grade, from Iolani.

(Results continued on next page)
STATE TEAM CHAMPIONS:
The State Math Bowl XXXIII in 2011 in Division A (small schools) showed that the private schools did prevail as Saint Louis re-captured first place and the State Division A Champion title with Maryknoll in second place, and Hanalani Schools in third place. Other small schools in alphabetical order that did well were the following: Hawaii Baptist Academy, Kahuku High School, Kailua High School, Kalaeo High School, Sacred Hearts Academy, and Saint Andrew’s Priory. In Division AA (large schools), Iolani earned a perfect score, which was indeed a rare accomplishment, and so, won the State Division AA Championship with Mid Pacific Institute in second, and Mililani High School in third. But other schools in alphabetical order that were very competitive were: Campbell High School, Kamehameha - Kapalama, McKinley High School, Moanalua High School, Punahou, Roosevelt High School, and Waipahu High School.

The Division A (small school division) Champion, Saint Louis, was led by Head Coach Samnang Sea with Byung Hee Chun, Dong Kuk Huh, and Patrick Ma and support from team members: Eric Angle, Erik Lemasa, Dayne Okamura, and Daniel Park.

The Division AA (large school division) Champion, Iolani, was led by Head Coach Michael Park, Richard Chang, Teresa Ou, Dustin Shigaki.

Several current HCTM leaders have been very active in the State Math Bowl. These HCTM leaders are: Debbie Kula and Tim Cantley of Sacred Hearts Academy; Laura Nagata of Roosevelt High School; and Kim Slagel of Kamehameha – Kapalama Heights.

Many have given generously of time and talents to support the State Math Bowl. For example, the Brigham Young University Hawaii has generously provided its campus, facilities, supplies, equipment, and related matters without charge for the State Math Bowl. The Polynesian Cultural Center (PCC) has provided entertainment. The Hawaii Council of Teachers of Mathematics has long supported, and has led the way in fostering the State Math Bowl.

Many government leaders and businesses have supported this State Math Bowl. For example, each year, Governor Neil Abercrombie has promulgated a State Proclamation. Mayor Peter Carlisle has done likewise. There are also letters of welcome and commendation from all four legislators from Hawaii to Washington, D. C. (Senators Akaka and Inouye, Congresspersons Hanabusa and Hirono) as well as State legislators, and many chief executive officers of major organizations.

Congratulations, and best wishes should be offered to not only the individual winners in Hawaii, but also the team winners of the Hawaii State Math Bowl! The above champions will be recognized by Governor Neil Abercrombie and Mayor Peter Carlisle.
The 2010-11 season of the Oahu Mathematics League (OML) is officially completed with the last math meet held at Campbell High School on April 16. OML is an association of approximately 30 public and private schools that have promoted mathematics education for the last four decades by organizing monthly mathematics competitions for students.

The top five schools in each division were:
- **Leibniz Division**: Iolani, McKinley, Kamehameha, Punahou, Mid-Pacific
- **Newton Division**: St. Louis, Hanalani, Kaiser, Sacred Hearts, Aiea
- **Junior Varsity Division**: Iolani, McKinley, Kamehameha, Mililani, Hanalani

The Leibniz Division is for teams of 10 students while the Newton Division is for teams of between 6 and 10 students and the Junior Varsity Division is for freshmen and sophomores. In addition, Pearl City was awarded the Most Improved Award in the JV Division.

Individual achievement was also recognized with the OML Merit Award – the highest honor OML can bestow. These students have consistently demonstrated reliability, leadership, and mathematical ability:
- Maria Behrens, McKinley
- William Gaul, Mililani
- Rachel Roley, Mid-Pacific
- Chung Yin (Amanda) So, McKinley
- Thu Hien (Tina) Tran, McKinley

Competitions for the upcoming 2011-2012 season have already been determined:
- **Meet 1**: September 17, 2011 @ Kailua
- **Meet 2**: October 22, 2011 @ Roosevelt
- **Meet 3**: November 19, 2011 @ Waipahu
- **Meet 4**: January 14, 2012 @ Mililani
- **Meet 5**: February 11, 2012 @ Kaiser
- **Meet 6**: March 3, 2012 @ McKinley
- **Meet 7**: April 14, 2012 @ St. Louis

For more information, OML has a website at [www.oahumath.org](http://www.oahumath.org) that also includes a Facebook link. If individuals are interested in having their school join OML and become a member school – or just have a question about OML – feel free to contact Lance Suzuki the league president at lancesuzuki.oml@gmail.com.
Math/Science Teachers and Their Students Summer Institute 2011

Please contact Laura Nagata at laura.nagata@yahoo.com if you want more information regarding this Institute. You can register for the class by sending your registration form and payment to:
The Gloria Kekukahiko Silvira Memorial Scholarship Fund
Attn: Winona Oato
c/o Kailua High School
451 Ulumanu Drive
Kailua, HI 96734

MaTCH – Math Teachers’ Circle Hawaii Summer Retreat

Join the 1st Math Teachers’ Circle Summer Retreat in Hawaii!

Join us for four days of stimulating discussion centered around secondary (gr. 7-12) mathematics. Develop your mathematical content and pedagogical understanding through the support of a collaborative team of University of Hawaii mathematicians and educators. Together we will work on a variety of rich mathematical problems aligned with the Common Core State Standards. This is a great opportunity to earn 3 credits that may be applied to reclassification, adding a field on your license, or work to achieve highly qualified status. Visit the PDE3 website for details!

Registration Deadline – May 26, 2011

Dates: June 1 – 4, 2011 & Follow Up Session – One Saturday in August – Date TBA
Place: University of Hawaii Wist Hall 233
Time: 8:30 a.m. – 3:00 p.m.
Contact: Seanyelle Yagi Phone: 735 – 8293
Or email: seanyelle_yagi@notes.k12.hi.us

Fall Conference for Elementary and Middle School Math

Join Michael Serra, author of Discovering Geometry, and other experienced Math Educators for a morning of hands-on learning activities. Michael Serra will present a session on Reasoning suitable for grades 5-8. Bring your students along to the workshop and participate in a Reasoning Relay Race, on the Kamehameha Schools campus.

More sessions are being organized in the upcoming weeks. So, save Saturday September 24th for this Fall Conference. Cost for members is just $5 with breakfast and door prizes included! Check the HCTM website, www.hctm.org for more information as it becomes available.
“Putting the Future in Students’ Hands”
Hosted by
University of Hawaii - Curriculum Research Development Group

“Two” TI-Nspire Technology Institutes for Secondary Teachers - Beginner or Intermediate Course

June 15th – 17th Beginner
July 18th – 20th Intermediate

In this workshop you will:
- Focus on Algebra - Common Core State Standards
- Tough To Teach Tough To Learn Concepts
- Experience the creative integration of various technologies for engaging math instruction
- Learn how to use interactive investigations, animations, e-flash cards, sliders and more to assist students in learning
- Receive strategies, resources and valuable tips for immediate use in the classroom
- Professional Development in Appropriate Use of Technology To Increase Mathematical Achievement of All Students

**Registration cost: $350**
- **HDOE teacher’s registration paid.**
  - OCISS will be supporting your attendance by paying for the registration fee
  - To register for the workshop, please follow the instructions below:
    - 2. Click on "Workshop By Location"
    - 3. Scroll down to Hawaii and select the workshop for the June 15 – 17 or July 18 – 20 date.
    - 4. Click on the Details link. (this will open the page with the host site, organizer, map of location, etc.)
    - 5. Click on Register Now at the bottom left side of the Details page.
    - 6. Fill in all of your registration information.
    - 7. Located at the bottom of the registration page is a place for PO information and PO number. Insert the following information:
      - PO Number: 2011HIDOE
      - Purchase Order Contact Details:
        - PO administrator: Dewey Gottlieb
        - PO administrator phone: 808-203-5537
        - PO administrator fax: 808-735-8227
        - PO administrator Email: dewey_gottlieb@notes.k12.hi.us

Dewey Gottlieb will be submitting a PO to Texas Instruments on your behalf, so you do not need to fax in a PO. He has already made arrangements with TI regarding this.

Please encourage your colleagues who may also be interested to contact Dewey Gottlieb if they are interested in registering. Space is limited to 30 participants (note: although the registration fee is being paid for HIDOE teachers, the workshop is open to anyone, not only HIDOE teachers, so spaces may fill up quickly).

Each participant will receive:
- **Course Material Package: Instructional Activity Binder**
- **1 Nspire CX Handheld ($150 value)**
- **1 Single User License of TI-Nspire CX Teacher Edition Software ($150 value)**
- **1 Cliff Notes For TI-Nspire Booklet**
- **3 Days Professional Development training**
Reader Submissions

The following articles were submitted by William G. Mandras, BS, MS in Mechanical Engineering; Minor in Mathematics Engineer: Northrop-Grumman Corp., Technical Specialist in aircraft structures; Assistant Professor of Engineering, Academy of Aeronautics, Queens, NY; Adjunct Instructor of Mathematics, Oxnard CC, CA

**Hands As A Calculator**

**Abstract:**

Number sums and products are abstract concepts that cannot be easily associated with visual objects and are, therefore, very difficult facts to memorize. Two readily available and familiar visual objects, the hands, can form an association with number sums and products that enables a much easier memorization process to occur. One alternative to rote memorization is to have the students verify the addition and multiplication facts using their hands as a calculator. Through repetition of the procedures, the addition and multiplication facts will be memorized and when recall fails, the hands are always available to do the calculation.

[http://www.youtube.com/watch?v=htV72mvkujA&playnext=1&list=PL11B08B541E56A540](http://www.youtube.com/watch?v=htV72mvkujA&playnext=1&list=PL11B08B541E56A540)

**Subtraction By Addition**

**Abstract:**

Subtraction By Addition avoids the extensive modification of the minuend that are prevalent in the textbook algorithm for subtraction. A special case algorithm is formulated that enables students that are initially learning addition to be learning subtraction by default. The general case algorithm, valid for all numbers, that avoids minuend modification and the mental and computational demands of borrowings and carries is formulated and discussed.

[http://www.youtube.com/watch?v=g7adGJMUBPk&playnext=1&list=PL0ECD3A8166DA66AB](http://www.youtube.com/watch?v=g7adGJMUBPk&playnext=1&list=PL0ECD3A8166DA66AB)

**The Psychology of Learning in Mathematics**

Dr. Marlow Ediger, Prof Emer, Truman St. University

Mathematics teachers need to use the psychology of learning in teaching mathematics. With its use, students are assisted to achieve more optimally. What should be stressed in the psychology of learning?

* students need to be fully engaged in teaching and learning situations. With adequate background information through a variety of activities, students may be guided to achieve objectives of instruction more readily.

* securing student interest in ongoing lessons aids achievement. Interest in mathematics is a powerful factor in making increased optimal progress. Time on task is a by product of students focusing on the lesson at hand.

* purpose in learning is vital. The teacher then needs to assist students to perceive reasons for achieving. Achieved objectives, here, provide mathematical ideas for use in school and in society.

* motivated learners tend to achieve at a higher level than the non-motivated.

The mathematics teacher must find learning activities which increase energy levels for goal attainment. Intrinsic motivation where the desire for learning comes from within is best, but there are times when extrinsic motivation, too, might well assist selected learners to achieve. Reinforcement theory is then in evidence.

The classroom environment also needs careful consideration when assisting students in achievement. A relaxed environment, conducive to learning, needs to be in evidence whereby caring students, too, help each other as the need arises. Quality sequence avoids gaps in student learning and assists learners to attach meaning to ongoing lessons and units of study.
HCTM Membership Application (Join, Renew, or Refer a friend 😊) 2011-2012

Visit:  http://hctm.org and click on Membership Information to register online
or complete this form and mail with payment:

Name ____________________________________________
Home Address ______________________________________
City, State, ZipCode __________________________________
Home Phone # _________________ Cell Phone # ________
Email: ____________________________________________
Alternate email: ____________________________________

School (or office) ________________________________________________________________
School Address ________________________________________________________________
School City, State, ZipCode ______________________________________________________
School Phone # ____________________
Position ___________________________ Grade Level __________

Membership status:   New ______ Renewal ______ Are you a full-time student? ________
Membership fee: $15.00 (general membership) $7.50 (college student)

How do you prefer to receive the HCTM newsletter? _____email _____mail at home _____mail at school

Are you currently a member of NCTM (National Council of Teachers of Math)? ______

Please enclose payment with this application.
Make Checks payable to: "HCTM".
School purchase orders use "DOE Vendor ID#116991 Hawaii Council of Teachers of Mathematics".

Mail to: HCTM  c/o Deborah Kula
3253 Waialae Ave.
Honolulu, HI 96816

Membership year ends: August 31, 2012