

The V²CTM Reflection



THE VALLEY OF VIRGINIA COUNCIL OF TEACHERS OF MATHEMATICS
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Spring Meeting set for April 18 at Wilson Middle Theme is Probability and Statistics

The probability is near 1 that you'll enjoy a great meeting at the Annual Spring V²CTM Meeting to be held on Wednesday, April 18, at the new Wilson Middle School in Fishersville. The program includes a presentation from two representatives from the Virginia Lottery as well as several sessions by local educators. To get to Wilson Middle School from I-81 take Exit 222 onto US 250 East toward Fishersville. Stay on 250E for approximately 3 miles. Turn left at the traffic light onto Woodrow Wilson Avenue. You will see signs directing you to turn right onto John Lewis Road which leads to Wilson Memorial High School on the right then Wilson Middle School on the left. Registration is available on-line at <http://www.rockingham.k12.va.us/register>. A registration form is also available on the last page of this newsletter. Registrations need to be in before April 11. The cost of membership and dinner is just \$10. If you paid your annual membership at the November meeting, the dinner cost is only \$5. Door prizes will be given at dinner! First-time attenders and students have membership and dinner fees waived! The program is as follows:

- 4:30 – 5:00 **Registration.** Thanks to the Wilbur S. Pence Middle School Math Department for providing refreshments!
- 5:00 - 6:00 **General Session:** *We've Got Your Numbers: Statistics and State Lotteries* by Deborah Courtney, Director of Finance, Virginia Lottery and John Hagerty, Communications Specialist, Virginia Lottery
- 6:00 – 6:45 **Dinner** prepared by *Classic Catering*: Roasted Pork Loin, Marinated Chicken Breast, Baby Red Potatoes, Seasoned Green Beans, Mixed Green Salad, Bread and Butter, Coffee, Tea and Water, Dessert
- 6:45 - 7:00 **Business Meeting.** Judy Kidd, President
- 7:00 - 8:00 **Sessions:**
 K-2: *A Spin on Probability for the Early Grades* by Karleen Arehart, Riverheads Elementary School
 3-5: *Probability In Action* by Laurie Biser, Riverheads Elementary School
 6-8: *"Statsharmony.com" – Helping you Find a Friend* by Colleen Watson, JMU
 9-12: *Why Statistics?* by David Lineweaver, Harrisonburg High School

General Session Features Virginia Lottery Reps

The Virginia Lottery is a business that is all about numbers: winning numbers, odds, production costs, jackpot amounts and the amount of money raised for public schools, just to name a few. Statistics play a big role in the Lottery's operations. Deborah Courtney and John Hagerty of the Virginia Lottery will talk about some of those numbers and statistics, and show how Lottery profits benefit Virginia's K-12 public schools.

Deborah C. Courtney, CIA, is Director of Finance for the Virginia Lottery. Her general responsibilities include overseeing and reporting annual revenues exceeding \$1.3 billion, managing an investment portfolio valued over \$500 million for purposes of meeting future prize payment obligations, and accounting for nearly \$800 million in prizes annually. She manages budget and forecasting, business analysis, tax compliance issues, auditor relations, financial statements, banking and cash management.

Deborah has nearly 20 years experience in finance, accounting and internal audit working for the Virginia Lottery, the University of Virginia, the Virginia Department of Conservation and Recreation, and the Virginia Department of Professional and Occupational Regulation. A graduate of the University of North Carolina at Charlotte, she holds bachelor's degrees in accounting and mathematics with a concentration in applied statistics. John Hagerty has been with the Virginia Lottery for more than five years. As Communications Specialist, he performs public relations, media relations and internal communications functions. Often it means interviewing winners of large prizes for news purposes. John has met almost all major Virginia Lottery prize winners over the past five years, and has heard some very interesting stories!

Prior to joining the Lottery, John spent 14 years as a television news journalist. He was a reporter with WTVR-TV (CBS 6) in Richmond. Before that he worked for three years as a producer with WJLA-TV in Washington, DC. He also worked as a reporter at WGHP-TV in Greensboro, North Carolina and weekend news anchor with KFDA-TV in Amarillo, Texas. He received two Associated Press Broadcasters awards and was nominated for an Emmy. John is an active volunteer with the Richmond Chapter of the American Red Cross and the Make-a-Wish Foundation. He is originally from Minneapolis, and graduated from the University of Minnesota.

Grade Level Sessions Feature Local Educators

Karleen Arehart, Riverheads Elementary School Kindergarten teacher, will conduct the K-2 session entitled "A Spin on Probability for the Early Grades in which she will provide lots of ideas and activities to encourage thinking and challenge students to predict outcomes.

Laurie Biser, 4th grade teacher at Riverheads Elementary School, will provide 3rd-5th grade teachers with hands-on experiences designed to enhance student understanding of probability and data analysis in the elementary and middle school classroom. Participants will predict, gather/organize data, and interpret results of a horse race in which horses advance only by the "roll of the dice".

Colleen Watson, from the mathematics department of James Madison University, will lead middle school teachers to "Statsharmony.com" – Helping you Find a Friend. Want to find a friend with the same recreational and food interests as you? Look no further, we can help! Engaging, data collection exercises are the critical, beginning point to capture students' attention to ensure learning and understanding of data analysis. We will explore some fun hands-on data collection exercises. Excel will also be used.

Dave Lineweaver, math teacher at Harrisonburg High School, will lead high school teachers in a discussion of What is statistics, why is it important and how can it be taught in high school. Topics and activities will be explored and how does a Statistics class fit into a high school program.

Election of V²CTM Officers for 2007-08

At the business meeting, the following slate of current officers will be presented for re-election. Secretary: Jenny Gibson, Rockingham County Public Schools; Treasurer: Judy Phillippi, James Madison University; Board Members: Bob Hanson, James Madison University; Amy Henderson, Harrisonburg City Schools; and Pat Lintner, Harrisonburg City Schools. The other officers and Board members were elected or appointed in 2006. Also, LouAnn Lovin, James Madison University, will serve V²CTM as our NCTM representative and Harvey Almarode, James Madison University, will serve as the 24 Challenge Tournament Chairperson.

24 Challenge Tournament a Great Success

On March 26th at Wilson Middle School in Augusta County, the first regional 24 Challenge Tournament was held. The tournament was sponsored by V²CTM and James Madison University. There were 80 students from 19 elementary schools representing the divisions of Augusta County, Harrisonburg City, and Rockingham County. Two rounds of the 24 game were played and the field of contestants were narrowed down to the top 16 semifinalists. Another round of 4 games was played to determine the final 4 for the championship game. This year's winner was Joseph Cornelius from Churchville Elementary. All the semifinalists received bronze medals, the finalists received silver medals and calculators with the Champion receiving a trophy along with his gold medal and calculator. Plans are being made for next year's tournament and if you wish assistance at your schools contact either your Curriculum Supervisor for your division or Harvey Almarode (almarolh@jmu.edu). V²CTM would like to encourage all elementary schools in the region to participate.



Students lead the Olympic-style parade around the Wilson Middle School gym.



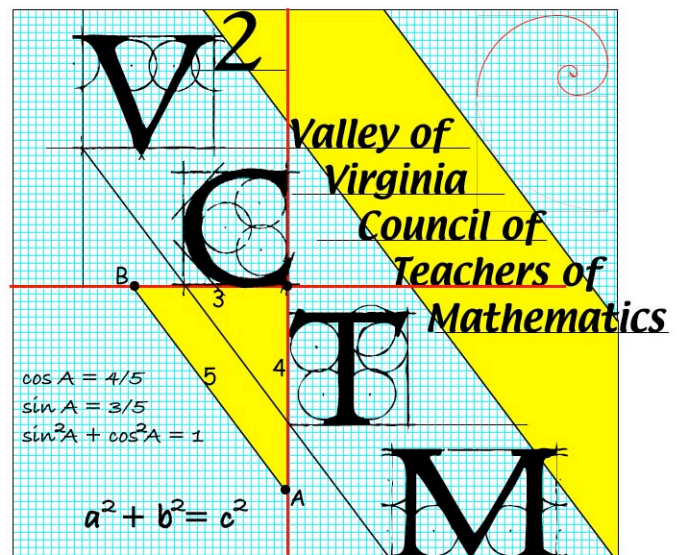
Eighty students compete in groups of four as Harvey Almarode runs the competition



The semifinals and finals were projected for the audience to see.

V²CTM Logo

Harvey Almarode designed the logo to the right when he was advertising the 24 Challenge Tournament. Can you identify the math symbols used in it?



State Board Gives Green Light for New High School Math Course

Recognizing that some students need additional time and instruction to improve their skills in the areas of algebra and data analysis as they prepare to enter postsecondary instruction and work, in May 2006, the Department of Education convened a representative statewide group of stakeholders to discuss the desirability of creating a new mathematics course focusing on the advanced study of relations, functions, and data analysis. During this same time frame, professionals involved in mathematics education in Virginia were informally polled about this topic. Respondents indicated that there appears to be a gap in Virginia's course offerings that could be filled by a course focusing on advanced study of relations, functions, and data analysis. On October 25, 2006, the Board granted approval for the Department to proceed with the development of Standards of Learning for this optional high school mathematics course.

During December 2006, the Department convened a team of secondary mathematics educators and developed a set of proposed Standards of Learning for a new, optional mathematics course. The new offering, tentatively titled, "Algebra, Functions, and Data Analysis," is intended to assist students in building more advanced mathematical foundations in preparation for higher level mathematics coursework. The new course would help students to:

- model real world phenomena using algebra;
- analyze and represent algebraic relationships and functions using tables, equations, and graphs;
- translate easily between representations of functions;
- select and use appropriate statistical methods to analyze data; and
- develop and evaluate inferences and predictions that are based on data.

The course would be above the level of algebra and geometry. With approval by the Board, this new, optional course could be used to satisfy a mathematics credit for graduation.

The proposed Algebra, Functions, and Data Analysis Standards of Learning may be found on the Department of Education's Web site at http://www.doe.virginia.gov/VDOE/VA_Board/Meetings/2007/feb-itemG.pdf.

Comments should be e-mailed to Deborah Kiger Bliss, mathematics coordinator, at Deborah.Bliss@doe.virginia.gov.

On February 28, 2007, the Virginia Board of Education accepted for first review proposed Standards of Learning for the course. The Virginia Board of Education is now seeking public comment on the proposed Standards of Learning for use in the public schools of the Commonwealth. The Virginia Board of Education will hold three public hearings to solicit comments on the proposed Algebra, Functions, and Data Analysis Standards of Learning. Two public hearings will be held on April 30, 2007, at 7 p.m. at:

George Wythe High School
1 Maroon Way
Wytheville, VA 24382

Robinson Secondary School
5035 Sideburn Road
Fairfax, VA 22032

Once approved by the State Board of Education, divisions may include this course in their mathematics curriculum. The Department of Education plans to convene a committee this summer to work on a scope and sequence for this course as well as textbook recommendations. It is believed that most school divisions may implement this course in the 2007-08 school year.

JMU Offers Course for the Highly Qualified Middle School Initiative

JMU will sponsor *HQT Fractions, Decimals, and Percents: Developing Proportional Reasoning*, the fifth course to be developed as part of the Highly Qualified Middle School Mathematics Teacher Initiative supported by the Virginia Department of Education. The content of this course is geared to the teaching and learning that takes place in a middle school classroom. Much of the material is also appropriate for grades 4 and 5. This is a 3 credit hour graduate mathematics course which can be used for renewal credit and/or HQT status. The class will be held at JMU from June 14 - June 27, at 8:30 am to 1:00 pm daily. Tuition will be paid by participant's school district. There is a \$300 stipend per participant. Class size is limited to 16 participants. All materials are furnished. The course will be taught by Judy Kidd (JMU) and Jenny Gibson (RCPS). Contact Judy Kidd at kiddjb@jmu.edu or 540-568-2921 for enrollment information.

D.O.E. Releases Videos for Middle School Teachers

The Department of Education has announced the release of over a dozen videos for middle school mathematics teachers. In this set of video clips, Virginia educators demonstrate strategies and activities that can be used to teach the sixth- and seventh-grade mathematics Standards of Learning. The topics selected for these videos, though not comprehensive, represent key concepts from the 6th and 7th grade SOL. The videos, described below, are located on the DOE website at: <http://www.doe.virginia.gov/VDOE/middle-math-strategies/>

- Working with Vocabulary/Concept Development (Grades 6 & 7) Dr. Lois Williams, VDOE mathematics specialist, on the Frayer Model for vocabulary/concept development.
- Units of Measure (Grades 6 & 7) Karen Cribbs models a visual approach to the concepts measurement
- Fraction Concepts (Grades 6 & 7) Dr. Ena Gross, Virginia Commonwealth University (VCU) professor of mathematics education, on the prerequisites students need for fraction computation.
- Vocabulary (Grades 6 & 7) Dr. Lois Williams shares a technique to assist students who confuse common mathematics terms such as radius and diameter.
- Fraction Computation (Grade 6) Dr. Ena Gross on one method sixth graders can use to approach multiple-choice fraction computation problems.
- Multi-Step Problem Solving (Grades 6 & 7) Cheryl Gray, Spotsylvania County Schools middle school mathematics specialist, on how to approach multi-step problems with data presented in a table.
- Extending Patterns (Grades 6 & 7) Denise Walston, Norfolk Public Schools senior mathematics coordinator, on how to help students extend patterns. Handouts available.
- Box and Whisker Plots (Grades 6 & 7) Brian Domroes, Spotsylvania County Schools middle school mathematics specialist, on techniques for engaging students with box and whisker plots.
- Converting Units (Grade 6) Dena McElligott, Virginia Middle School Mathematics Teacher Corps member in Virginia Beach Public Schools, shares a problem-solving strategy for converting units.
- Statistics (Grades 6 & 7) Brian Domroes provides analysis-level questions for statistics.
- Liquid Measure (Grade 6) Dena McElligott demonstrates a manipulative that helps students see the relationships among the customary units of liquid measure.
- Rules for Order of Operations (Grade 7) Dr. Lois Williams shares an activity to get students to use writing in mathematics to remember the rules for the order of operations. Handout available.
- Volume and Surface Area (Grade 7) Karen Cribbs, Hanover County Public School secondary mathematics specialist, demonstrates a hands-on introduction to volume and surface area.
- Ratios (Grade 6) Denika Gum, Albemarle County Public Schools sixth-grade mathematics teacher, on manipulatives to help sixth-grade students grasp the concept of ratio.

Looking ahead...

At the fall 2007 meeting, Peter Kohn, Carla Martin and Laura Taalman from JMU will lead a session about tips for middle and high school math teachers about math and science projects students do for annual fairs.

2006-2007 V²CTM Officers

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| President..... | Judy Kidd, James Madison University (kiddjb@jmu.edu) |
| President-Elect | Terry Murray, Harrisonburg City Schools (tmurray@harrisonburg.k12.va.us) |
| Past President, NCTM Rep | LouAnn Lovin, James Madison University (lovinla@jmu.edu) |
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| Treasurer | Judy Phillippi, James Madison University (phillija@jmu.edu) |
| Newsletter Editor | Joe Hill, Rockingham County Schools (jhill@rockingham.k12.va.us) |
| 24 Challenge Tournament Chairperson | Harvey Almarode, James Madison University (almarolh@jmu.edu) |
| Board Members: | Robert Hanson, James Madison University (hansonjr@jmu.edu), John Matherly, Augusta County Schools (jmatherly@augusta.k12.va.us), Margo Jantzi, Rockingham County Schools, (mjantzi@rockingham.k12.va.us), Kara Velez, Rockingham County Schools (kvelez@rockingham.k12.va.us), Pat Lintner, Harrisonburg City Schools (plintner@harrisonburg.k12.va.us), Amy Henderson, Harrisonburg City Schools (ahenderson@harrisonburg.k12.va.us) |

V²CTM Spring 2007 Meeting Registration

Return this registration form to Joe Hill, Rockingham County Public Schools,
100 Mount Clinton Pike, Harrisonburg VA 22802. Better yet, register on the web at
<http://www.rockingham.k12.va.us/register>
You may pay at the door on April 18.

Name _____

School _____

School Address _____

Home Address _____

Annual Membership & Dinner Fees for those who did not pay membership dues in the Fall \$10.00

Dinner Fees for those who did pay membership dues in the Fall \$5.00 Enclosed _____

E-mail Address _____

See you at Wilson Middle School on April 18!

V²CTM Reflection

Joe Hill, Editor

Rockingham County Public Schools

100 Mount Clinton Pike

Harrisonburg VA 22802

**PLEASE SHARE THIS NEWSLETTER WITH ALL MATHEMATICS TEACHERS,
GRADES K-12**