



Wahpe Woyaka pi

(Talking Leaf)

South Dakota Council Teachers of Mathematics Newsletter

Presidential Ponderings

I hope the summer is going well for all of you. I have found a few days to read, garden, fish, golf, and just plain relax after a busy school year. The months of work on writing the South Dakota Mathematics Standards document was draining but incredibly rewarding. I believe this document is a readable, user-friendly, credible complete body of work. Even the preface is replete with suggestions, clarifications, and other noteworthy information. After having opportunities to peruse other state standards documents, I believe we have one worthy of the excellent mathematics education that we in South Dakota work so hard to provide. My personal thanks go to all who worked on our Standards. Superb job!! Watch for more news this fall about the actual roll-out of the Standards.

Please check the back page of this newsletter to familiarize yourself with the new SDCTM Executive Board. You will notice some new names along with some of the veteran officers. I want to express my gratitude to Jean Gomer who performed her duties as President these past two years with a professional grace and class which distinguish her as a leader in our field. As Past President she remains a viable and valuable source of ideas and advice to me, to the Executive Board, and to the entire organization. Thank you, Jean.

In May I had the opportunity to represent the mathematics teachers of South Dakota in Baltimore at the NAEP State Mathematics Item Review. This was a gathering of mathematics specialists from each state. Our task was to review and adjust the questions on NCLB assessments. In addition to our specified objectives, I had the opportunity to visit with mathematics people from around the country. I can tell you that we are one of the leaders in the arduous struggle to meet the mandates of NCLB.

Craig Sherman and I attended the NCTM Leadership Conference in Omaha on June 11-13. We had the opportunity to meet our NCTM President Cathy Seely and other members of the NCTM Board of Directors. The conference provided us with an abundance of helpful material and connections.

Elsewhere in this newsletter is a **speaker form** for our Joint Spring Conference. I encourage you to submit a proposal and join us for a fun and educational weekend on February 3-5, 2005. We are especially in need of presenters at the elementary and middle school levels in mathematics. If you are a first time presenter and are a bit nervous, you should consider presenting with a colleague. Everyone has some expertise worth sharing. Please come to Huron and enrich your audience while you glean information from some of our 80 or more sessions. Despite the weather, the 2004 Conference was a huge success. Thanks to Jean Gomer of SDCTM and Ken Graupmann of SDSTA for a wonderful program and great presenters.

Our regional mathematics presenters at the 2005 Joint Spring Conference will be Penny Roberts (K-5) from Kentucky, Nancy Berkas (6-8) from Wisconsin, and Marsha Lillie (9-12) from Texas. Penny was here five years ago and dazzled her full sessions with amazing energy and detective work. Nancy is our NCTM Regional Affiliate Services Representative. She is an accomplished speaker. Marsha comes highly recommended by Bill Gripenrog. Also, I have just received an enthusiastic commitment from Dr. Rick Melmer to be our Banquet speaker. He is the Secretary of the South Dakota Department of Education. I am pleased that Dr. Melmer has accepted my invitation to speak to us. These are critical times for South Dakota educators in the fields of mathematics and science, and I am sure that his remarks will be noteworthy and inspirational.

As I close my lengthy first letter to the membership of SDCTM, I want to remind you of two things. Firstly, check our great website at sdctm.org (Thanks, Cindy!!). Secondly, SDCTM is a service organization. The Executive Board is here to address your questions, concerns, suggestions, proposals, etc. Please involve us when you need a partner, an advisor, an advocate, or a contact person. I am looking forward to the next two years as your President. Let's continue to do all of those great things we do in our South Dakota mathematics classrooms. Enjoy the rest of the summer and have a great school year.

Chuck Holmstrom
SDCTM President

Summer 2004

Inside this issue:

<i>Dr. Olson honored</i>	2
<i>Nominate an Excellent colleague</i>	2
<i>SDCTM Summer Symposium</i>	2
<i>Speeding Ticket Activity</i>	3-4
<i>Summer Symposium Registration Form</i>	5
<i>SDCTM/SDSTA 2005 Speaker Application</i>	6
<i>SDCTM Application</i>	7
<i>SDCTM Contacts</i>	8

Calendar Notes:

- July 24, 2004 - SDCTM Symposium Registration Deadline
- August 6, 2004 - SDCTM Symposium at O'Gorman HS, Sioux Falls
- October 15, 2004 - SDCTM/SDSTA 2005 Speaker Forms Due



SDCTM honors Dr. Curt Olson with the SDCTM Distinguished Service Award for Mathematics Education.

Thank You Curt & Happy Retirement

At the 2004 USD Merten Haase Mathematics Contest, the South Dakota Council of Teachers of Mathematics surprised Dr. Curt Olson with a presentation of the SDCTM Distinguished Service Award for Mathematics Education. (Check our website at sdctm.org to see photos of the presentation.) This award was originally scheduled to be presented to Curt in February at the 2004 SDCTM/SDSTA Joint Conference, but inclement weather prevented him from attending. Curt's USD colleagues, the USD student helpers, the school math advisors, and the hundreds of students competing in the contest applauded enthusiastically to express their appreciation for Curt's many years of service to USD, SDCTM, and the state of South Dakota. Curt is a past president of SDCTM and has been the SDCTM Newsletter editor for many years. We will miss his hard work, expert advice, and unique sense of humor. Congratulations Curt, enjoy your retirement, thank you for all you have done, and keep in touch.

NEWS BRIEF

Know a Great 7-12 Math Teacher? Nominate him or her to receive the Presidential Teaching Award!

We're looking for outstanding 7-12 math teachers for the 2005 Presidential Awards for Excellence in Mathematics and Science Teaching. The awards are sponsored by the White House and administered by the National Science Foundation.

Every year up to 108 National Awardees each receive a \$10,000 award, a paid trip for two to Washington, DC to attend a week-long series of networking opportunities and recognition events, and a special citation signed by the President of the United States.

The program is now accepting nominations of 7-12 teachers for the nation's highest honor for mathematics and science teachers. Anyone can nominate a teacher. Teachers should submit completed application materials by May, 2005. **For more information, including nomination and application forms, please visit www.nsf.gov/pa or www.sdctm.org and click on the awards link.**

SDCTM Symposium

Dates to remember are:
July 24, 2004
Registration closes;
August 2, 2004
Refund deadline;
August 6, 2004
SDCTM Summer Symposium at O'Gorman High School in Sioux Falls.

How does your teaching and curriculum match the new South Dakota Mathematics Standards? The South Dakota Council of Teachers of Mathematics is again sponsoring a Summer Symposium. The theme this year is "*Finding the new Mathematics Standards in your curriculum*" and we have planned something for every level of mathematics teacher. The new document contains much information in addition to the actual Standards. We will help you use this entire document to find the standards in your curriculum, adapt or correct your curriculum as needed, and create useable lesson plans and tests.

Educators and administrators from across South Dakota are invited to participate in this one-day symposium, starting at 8:00 am and ending at 3:30 pm. Agendas will be sent to all participants.

Our presenters (Jean Gomer, Cindy Kroon, Roxie Ahlbrecht, Diana McCann, Ellie Cooch, and Steve Caron) are members of the South Dakota Mathematics Standards writing team. They are experienced and exceptional mathematics educators from around the state. They have been integral participants throughout the entire standards-writing process.



In a Hurry? STEP on it!

A. The South Dakota Highway Patrol uses the following **Bond Schedule** to calculate fines for speeding tickets issued on interstate highways.

Mph over posted Speed limit	Fine (\$) (includes court costs)
1-5	66
6-10	70
11-15	110
16-25	186
26 and over	236

1. Generate a scatterplot that displays this information. Display mph over the posted speed limit on the x-axis, and \$ fine on the y-axis.
2. Which is the independent variable? Which is the dependent variable? Explain.
3. Is this relationship a function? Explain.
4. Calculate the linear regression equation associated with this data. Explain in words what the linear regression equation represents. Does it adequately describe the graph? Explain.
5. What type of function would best describe the behavior of this graph? Explain.

B. On other South Dakota Roads, the following **Bond Schedule** is used:

Mph over posted Speed limit	Fine (\$) (includes court costs)
1-5	\$51
6-10	71
11-15	91
16-25	111
26 and over	171

6. Generate a scatterplot that displays this information. Display mph over the posted speed limit on the x-axis, and \$ fine on the y-axis.
7. Which is the independent variable? Which is the dependent variable? Explain.
8. Is this relationship a function? Explain.
9. Calculate the linear regression equation associated with this data. Explain in words what the linear regression equation represents. Does it adequately describe the graph? Explain.
10. What type of function would best describe the behavior of this graph? Explain.

Source: South Dakota Highway Patrol (November 2002)

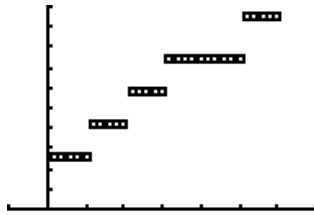
Cindy Kroon
 Mathematics Instructor
 Montrose High School
 309 Church ST
 Montrose, SD 57048

(605) 363-5025
 cindy.kroon@k12.sd.us



ANSWERS

(1) Fine in \$



MPH over posted speed limit (interstate highways)

(2) Speed is the independent variable, amount of fine is the dependent variable.

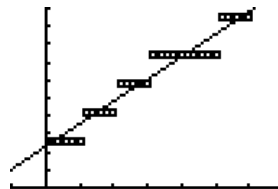
(3) Yes, there is a single value of Y (fine) for each value of X (speed).

(4)

```

LinReg
y=ax+b
a=6.284760845
b=56.91954023
r2=.9402179729
r=.9696483759

```

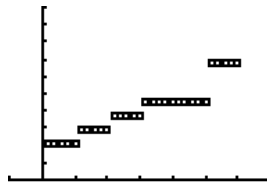


$$\text{Fine} = \$6.28(\text{mph over limit}) + \$56.92$$

It does not adequately describe the graph because the graph is horizontal in many places.

(5) A step function would describe the behavior of this graph because there is a large change in Y-value (fine) for a small change in X-value (speed.)

(6) Fine (\$)



MPH over posted speed limit (other SD roads)

(7) Speed is the independent variable, amount of fine is the dependent variable.

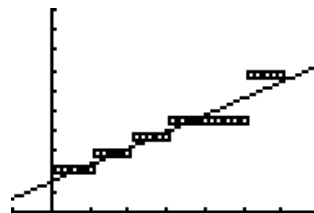
(8) Yes, there is a single value of Y (fine) for each value of X (speed).

(9)

```

LinReg
y=ax+b
a=4.115684093
b=37.20689655
r2=.885350648
r=.940930735

```



$$\text{Fine} = \$4.11 (\text{MPH over limit}) + \$37.20$$

It does not adequately describe the graph because the graph is horizontal in many places.

(10) A step function would describe the behavior of this graph because there is a large change in Y-value (fine) for a small change in X-value (speed.)

South Dakota Council of Teachers of Mathematics
SDCTM

A Symposium for Teachers in Grades K-12
Sponsored by SDCTM

“Finding the new Mathematics Standards in your curriculum”

Friday, August 6, 2004
O’Gorman High School, Sioux Falls, South Dakota

REGISTRATION FORM

How does your teaching and curriculum match the new South Dakota Mathematics Standards? The 2004 SDCTM Summer Symposium will answer that and many more questions concerning the new Standards. We will help you find the Standards already incorporated in your curriculum and adapt your curriculum, if needed. We will also lead you in generating new lesson plans and tests.

Educators and administrators from across South Dakota are invited to participate in this one-day symposium, starting at 8:00 am and ending at 3:30 pm. Agendas will be sent to all participants.

Our presenters (Jean Gomer, Cindy Kroon, Roxie Ahlbrecht, Diana McCann, Ellie Cooch, and Steve Caron) are members of the South Dakota Mathematics Standards writing team. They are experienced and exceptional mathematics educators from around the state. They have been integral participants throughout the entire standards-writing process.

NAME _____

SCHOOL _____

SCHOOL ADDRESS _____

HOME ADDRESS _____

SCHOOL PHONE _____ HOME PHONE _____

E_MAIL _____

GRADE LEVEL _____ YEARS OF TEACHING EXPERIENCE _____

Registration will close July 24, 2004. No refunds will be awarded after August 2, 2004.

This application and a check for \$50, made out to SDCTM should be mailed to:

**Chuck Holmstrom
4508 Chippewa Circle, Apt. #19
Sioux Falls, SD 57106**

Any questions should be directed to Chuck Holmstrom at the above address or at holmstromc@sf.k12.sd.us or at (605) 361-5154. Also check our website sdctm.org for this and other information.

**SPEAKER / PRESENTER FORM FOR THE JOINT CONFERENCE OF
SOUTH DAKOTA COUNCIL OF TEACHERS OF MATHEMATICS
and SOUTH DAKOTA SCIENCE TEACHERS ASSOCIATION
HURON, SOUTH DAKOTA FEBRUARY 3-5, 2005.**

OFFICE USE ONLY: Session No. _____ Day _____ Time _____ Location _____
--

Submission of this form constitutes acceptance unless otherwise notified.

(First Name) (Middle initial) (Last Name)

(First Name) (Middle initial) (Last Name)

(Name of School/Affiliation)

(Name of School/Affiliation)

Preferred Address: (circle one) work home

(Address)

How should name(s) and affiliation(s) be listed on the conference program?

(City) (State) (Zip Code)

(Name)

(Work Phone) (Home Phone)

(Affiliation)

(Email)

(Name)

(Affiliation)

Title of presentation: _____

Brief description: _____

Circle appropriate levels: K 1 2 3 4 5 6 7 8 9 10 11 12 C

Length of presentation: _____ one hour _____ two hours _____ three hours

Day of presentation: _____ Friday _____ Saturday _____ either day _____ both days

One overhead projector and screen will be provided for each room

Additional A-V equipment needed (Speakers are expected to bring their own computer and software): _____

Please return this form by October 15, 2004 to:

Jean Gomer
Box 96
White, SD 57276

Or email to gomerj@deubrook.com
Fax (605)-629-3701

**Speakers are requested to provide handouts for 30 on a first come, first served basis.
All South Dakota speakers must register for the conference.**

I agree to comply with the guidelines in the "Minimum Safety Guidelines for NSTA Presenters and Workshop Leader:" during my presentation. NSTA Minimum Safety Guidelines are located online at http://www.nsta.org/coru/safety.html	
Signature _____	Date _____

Last Modified 5/17/04



Membership Application Form

Mail with check payable to SDCTM to:

Diana McCann
41876 Apple Tree Road
Springfield, SD 57062

Name _____

School Name _____

Subjects or Grades Taught _____

Addresses

Home _____

School _____

Mailing Address: _____ Home _____ School

Home Phone _____

School Phone _____

Fax Number _____

E-mail _____

Membership categories (Check only one)

_____ Elementary School \$5.00

_____ Middle School \$10.00

_____ Junior High School \$10.00

_____ High School \$10.00

_____ Post Secondary \$10.00

_____ Retired \$5.00

_____ Student \$3.00



SDCTM Newsletter
c/o Sheila McQuade
2105 Melanie Lane
Sioux Falls, SD 57103



www.sdctm.org

2004-2006 SDCTM Executive Board Members

SDCTM President
Chuck Holmstrom,
Sioux Falls Roosevelt
(605) 361 - 5154
holmstromc@sf.k12.sd.us

Vice-President
Steve Caron,
Aberdeen Central High School
(605) 626 - 7900
steve.caron@aberdeen.k12.sd.us

NCTM Representative
Craig Sherman,
Yankton High School
(605) 665 - 7182
csherman@ysd.k12.sd.us

SDCTM Past President
Jean Gomer,
Deubrook High School
(605) 629 - 1101
jean.gomer@k12.sd.us

Secretary
Ellie Cooch,
Spearfish Middle School
(605) 717 - 1215
ecooch@spearfish.k12.sd.us

Webmaster
Cindy Kroon,
Montrose High School
(605) 363 - 5025
webmaster@sdctm.org

President-Elect
Bill Gripentrog,
Watertown High School
(605) 882 - 6316 ext. 721
gripentw@wtn.k12.sd.us

Treasurer
Diana McCann,
Bon Homme School
(605) 589 - 3387
dm57062@valyou.net

Newsletter Editor
Sheila McQuade
Sioux Falls O'Gorman High
(605) 336 - 3644
smcquade2@sfcss.org