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South Dakota Council Teachers of Mathematics Newsletter

Presidential Ponderings

Is it summer yet? I am finally starting to enjoy some relaxation time. My school year came to a rather unusual end. I served on two juries in the last two weeks of May. Both cases were very criminal, very interesting, and very educational. I missed both days of our district semester tests and one day of review. I hope this explains a below average performance by several of my students. I know that it is the reason for me being behind in several projects. One of those projects is this SDCTM Newsletter. Hopefully, my tardiness will turn into a positive if more people have time to sit back and enjoy this bit of summer reading.

Some reminders for the summer include the weeklong D.O.E. workshops on the Rollout of the South Dakota Mathematics Standards. If you were unable to attend the five individual sessions throughout the last school year, here is another chance to experience the rewards of these valuable workshops. Sites for these workshops are Sioux Falls, Aberdeen, Spearfish, and Brookings. Check the SDCTM website for dates and applications.

Another opportunity to pick up some great ideas for next year is the 2005 SDCTM Summer Symposium. The title of this Symposium is "Geometry For All." The date is Friday, August 5, 2005, at Sioux Falls Roosevelt High School. Details and a brief description of this Symposium are included in the application found elsewhere in this Newsletter.

I would like to thank all of those who were responsible for another wonderful SDCTM/SDSTA Professional Development Conference last February in Huron. The Friday Banquet was my favorite part of the weekend because we were able to surprise two very deserving people, Steve Caron and Jean Gomer, with special SDCTM Distinguished Service awards. Rick Melmer, the South Dakota Secretary of Education, delivered humor, insight, and vision with his keynote address at the banquet. Our South Dakota presenters were inspiring and helped us provide more than 80 sessions. **Please consider being one of our presenters next year. You are the foundation and stability of this Conference.** Our regional speakers were again tremendous, and we expect the same quality again next year.

The Conference will again be held in Huron at the Crossroads Hotel and Convention Center. The dates are February 2 – 4, 2006, Thursday thru Saturday. **The Convention Center is completely remodeled with three times the room and a connecting foyer to the arena.** *We are looking forward to a self-contained Conference with no need to venture outdoors except to catch a breath of the refreshing February air. Come join us for another great Conference!!*

Just one more note. Cathy Seely, the President of NCTM, has expressed to me her wish to visit South Dakota. People from around the country who have had occasion to work with members of SDCTM at our Conference and other workshops have shared their positive impressions with Cathy. She has heard so many good things about the mathematics teachers of South Dakota that she would like to share some of her valuable time with us. We are working on a time and place for her visit. Stay tuned for more on this tremendous opportunity for all of us.

Have a wonderfully refreshing rest of the summer. Again, I offer my apologies for the tardiness of this Newsletter. I hope to see many of you at meetings, workshops, the Symposium, or the Conference.

Chuck Holmstrom
SDCTM President

Summer 2005

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Inside this issue:

Calendar Notes:

- *August 5, 2005 SDCTM Symposium at Sioux Falls Roosevelt High School*

- *February 2-4, 2006 SDCTM/SDSTA Conference in Huron*

- *PAEMST Applications due May 2006*

Professional Development Opportunities Offered by DOE

The **Department of Education** will be offering three professional development opportunities this summer for mathematics educators.

The **Revised Mathematics Standards Roll-Out Course** will be offered again this summer for all interested K-12 mathematics educators. The format of the course will be a one-week intensive course that covers all five strands of the content standards—**Algebra, Geometry, Measurement, Number Sense and Statistics and Probability.** In this course, classroom teachers will be concentrating on the new SD Mathematics Content Standards in the context of (1) best teacher practice, (2) engaging students in meaningful learning experiences and (3) providing strong support for all learners to reason and think mathematically. **Room and board will be available and paid for participants who cannot commute.** Those wishing to make their own arrangements for accommodations may do so, but no allowance will be paid in this case. Participants will receive print copies of the standards as well as a number of teaching ideas for implementing the standards in their classrooms. They will work with experienced teachers who have both standards and grade-level expertise. Credit is available at participant expense.

*In this course,classroom teachers will be concentrating the **new** SD Mathematics Content Standards...*

Date	City	Location of class
July 11-15	Sioux Falls	Augustana
July 18-22	Aberdeen	NSU
July 25-29	Spearfish	BHSU
August 1-4	Brookings	Mickelson MS

In addition, DOE is offering two professional development opportunities in mathematics education for middle and high school teachers. These are week-long intensive courses that will be focused on improving content and pedagogical knowledge of **geometry** or **statistics and probability** in the mathematics curriculum. Instructors for these courses will be university professors with content expertise and high school teachers who have extensive experience in teaching this content in schools. Room and board is available, as well as a stipend and technology support. Credit is available at participant expense.

In addition, DOE is offering two professional development opportunities … focused on improving content and pedagogical knowledge of geometry or statistics and probability in the mathematics curriculum .

Date	Subject	Location	Instructors
July 18-22	Statistics/ Probability	SDSM&T Rapid City	Dr.Roger Johnson Marie Ritten
July 18-22	Geometry	USDSU Sioux Falls	Dr.Christine Larson Steve Caron

Registration and more information on these courses can be found at the following website: http://www.southdakotapd.com. Click on the calendar date.

Contact me if you have any questions, comments, or concerns.

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NEWS BRIEF

We're looking for outstanding K-6 math teachers for the 2006 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 K-6 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 1, 2006. **For more information, including nomination and application forms, please visit www.nsf.gov/pa or www.sdctm.org and click on the awards link.**

Know a Great K-6 Math Teacher? Nominate him or her to receive the Presidential Teaching Award!

Circles & Radii & Chords Oh-my

Circles & Radii & Chords Oh-my is a game for 2-4 players. It includes all of the parts of a circle: diameters, radii, center, area, circumference, minor arcs, major arcs, central angles, and chords. The game was used in high school geometry class, and the students responded well to the game. This is a good interactive way for the students to learn. Competing with each other to win kept them on task. It is a good idea to hand out the directions with the game board or put the directions on the chalk board so that the students can find an easy answer if a question arises. Circles & Radii & Chords Oh-my was inspired by a Pi Day activity involving circles.

Circles & Radii & Chords Oh-my was inspired by a Pi Day activity involving circles.

Materials needed: 2 dice, game board, 2 sets of questions, and game markers

To Play:
1. Shuffle the circle questions and area questions separately and place face down.
2. Start on the Start/Finish space.
3. Roll two dice. The sum of the two dice is the circumference of a circle; calculate the diameter.
4. If correct, round the diameter to the nearest unit and move that many spaces. If incorrect, you lose your turn.
5. Follow the directions of the space you land on. If you land on a space with a ? you answer a question from the "circle" question pile (page 5). If you land on an A, answer a question from the "area" pile (page 6). If correct you may stay on the square. If incorrect go back to where you started your turn.
6. To win the game, be the first player to go around the game board twice, and correctly answer a question at the finish line

Teresa Kloeckner is a student at the University of Sioux Falls. She student taught in the Mathematics Department of Montrose High School with Cindy Kroon.

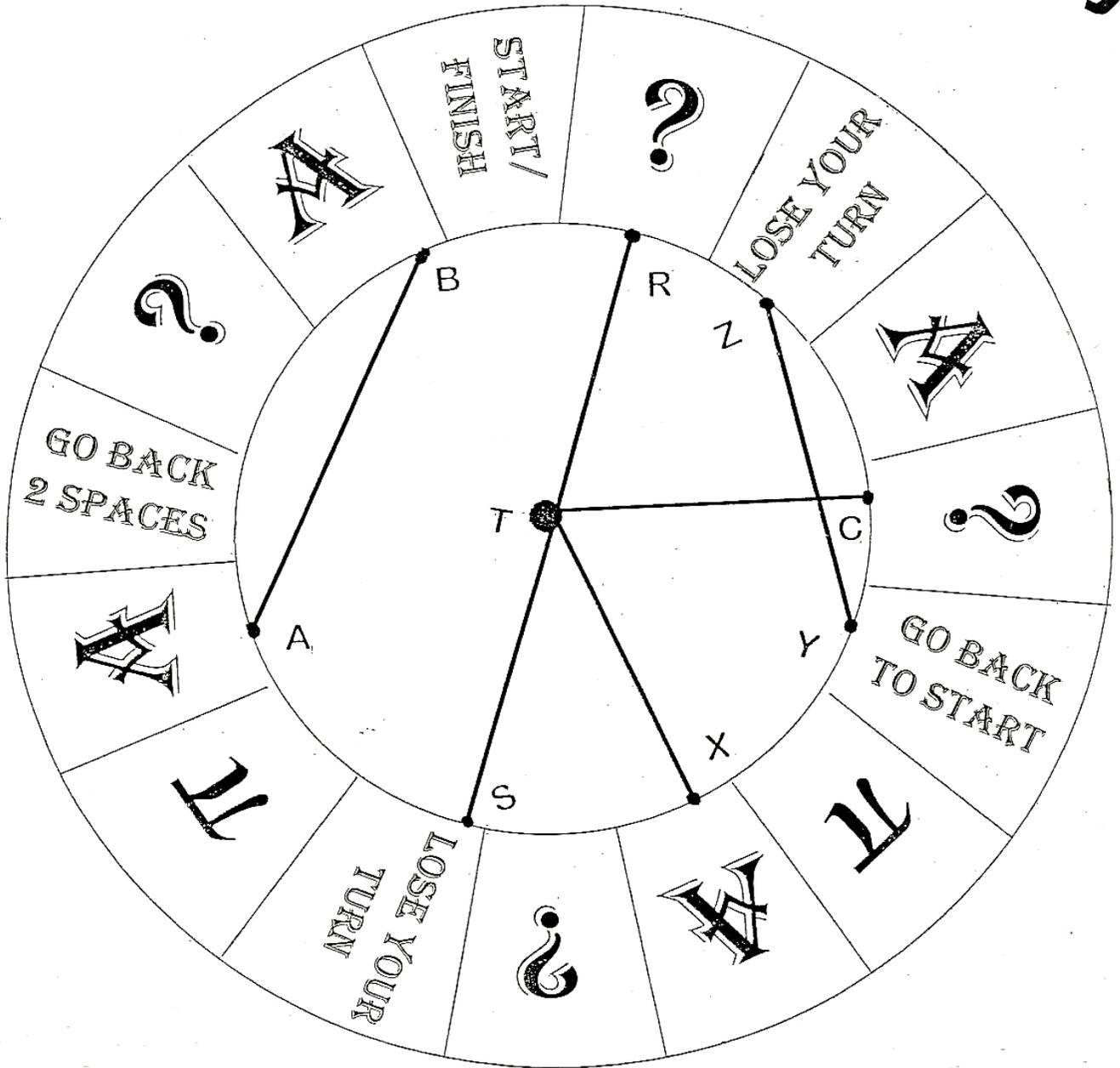# Circles & radii & chords oh-my

Circle Questions

Name a radius. $\overline{ST}$, $\overline{XT}$, $\overline{CT}$, $\overline{RT}$	If given the diameter, how do you figure out the radius? $\dfrac{D}{2}$
Name a chord. $\overline{AB}$, $\overline{ZY}$, $\overline{SR}$	If angle STC = 110° what is angle CTR? 70
True or false can a chord be a semi-circle? True	If angle RTX= 145° what is angle XTS? 35°
Name two radii. $\overline{ST}$, $\overline{XT}$, $\overline{CT}$, $\overline{RT}$	If angle RTX= 145° what is angle XTS? 35°
True or False: If it is a chord then it is a diameter. False	True or false, if you have a central angle then you have a minor arc? True
What is the name of this circle? T	What does circumference divided by diameter equal? π
What is the center of this circle? T	Define radius. The distance from the center of a circle to any point on the circle.
What is the formula for circumference? $C = 2\pi r$ or $C = \pi d$	True or False: A circle is a polygon. False
If SR = 10 then XT = __? 5	If ST = 5 then TR = __? 5
Name a central angle of circle T. $\angle XTC$, $\angle XTR$, $\angle STX$, $\angle CTR$, $\angle STC$	Name a major arc of circle T. XTC XTR STX CTR STC
How many degrees are in a semicircle? 180°	How many degrees are in a circle? 360°
Name a semi circle. $\overset{\frown}{SR}$	What is the diameter in terms of radius? D=2r
Name a semicircle of circle T. SAR SBR SXR SYR SCR SZR	Name a major arc of circle T. CRS XSR XSC XRC
Name 2 central angles of circle T. $\angle XTC$, $\angle XTR$, $\angle STX$, $\angle CTR$, $\angle STC$	Name two minor arcs of circle T. XC XR SX CR SC
How do you find a measure of a major arc? 360- minor arc	

Area Questions

If the area of circle T is 25π in², what is the radius? 5in	What is the radius if the area of circle T is 110.25π cm²? 10.5 cm
If the area of circle T is 16π in², what is the radius? 4 in	What is the radius if the area of circle T is 400π in²? 20 in
If the area of circle T is 64π in², what is the diameter?16in	What is the radius if the area of T is 256π m²? 16m
What is the radius if the area of T is 256π m²? 16m	What is the radius if the area of circle T is 400π in²? 20 in
If the diameter of a circle is 12.6 cm, what is the area? 39.69πcm²	What is the radius if the area of circle T is 110.25π yd? 10.5 yd²
What is the equation for the area of a circle? $A = \pi r^2$	What is the radius if the area of circle T is 400π cm²? 20 cm
What is the area of circle T if r = 3? 9π	What is the radius if the area of T is 113.04 m²? 6 m
What is the area of circle T if the r =10? 100π	What is the diameter of T if A= 121π m²? 11 m
What is the area of circle T if d = 36? 324π	Find the area of a circle with a circumference of 18.84 m. 28.26 m²
What is the radius if the area of circle T is 144π cm²? 12cm	The area of a circle is 100 in². What is the radius of the circle? 5.64 in
What is the area of circle T if r = 15? 225π	Find the area of a circle with a diameter of 26 cm. 530.66 cm²
What is the area of circle T if r = 9? 81π	The area of a circle is 78.5 in. Find its circumference. 31.4 in²
What is the radius if the area of circle T is 6.25π m²? 2.5m	Find the area of a circle with a radius of 8 meters. 200.96 m²
What is the radius if the area of circle T is 56.25π m²? 7.5m	The radius of a circle is 10. What is its area? 314
What is the radius if the area of circle T is 110.25π cm²? 10.5 cm	The circumference of a circle is 6.28. What is its diameter? 2

South Dakota Council of Teachers of Mathematics
SDCTM

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

"Geometry For All"

Friday, August 5, 2005
Roosevelt High School, Sioux Falls, South Dakota

APPLICATION

When it comes to teaching geometry, do you know all the angles? What can you do to enhance the education of your students in the study of geometry? The 2005 SDCTM Summer Symposium will address these and other questions concerning the teaching of geometry. We will tailor this workshop to your specific situation and grade level. Experts from around the state will lead sessions in content, teaching strategies, activities, and technology.

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.

NAME _____

SCHOOL _____

SCHOOL ADDRESS _____

HOME ADDRESS _____

SCHOOL PHONE _____ **HOME PHONE** _____

E_MAIL _____

GRADE LEVEL _____ **YEARS OF TEACHING EXPERIENCE** _____

Registration will close July 29, 2005. No refunds will be awarded after August 1, 2005.

This application and a check for $50, <u>made out to SDCTM</u> should be <u>mailed to</u>:
    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.

SDCTM 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

www.sdctm.org

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