Wahpe Woyaka pi

(T a l k i n g L e a f)

South Dakota Council Teachers of Mathematics Newsletter

Presidential Ponderings

Are you sick of winter yet? This has been a rough one, even by South Dakota standards. Last fall, the National Weather Service predicted a warmer and drier-than-average winter. The Old Farmer's Almanac called for a more severe winter with above-normal precipitation. I know which forecast I wanted to believe. The past few months have caused me to question whether I should put my faith in science, or the thickness of hair on a wooly caterpillar.

In spite of the threatening weather, over 200 hardy math and science teachers converged on Huron for the 18th annual SDCTM/ SDSTA professional development conference last week. It was well worth the trip. Fantastic speakers came from across the country. South Dakota presenters delivered their usual excellence. Friday night's banquet speaker, Keith Van Tassel, was outstanding. (As he described the teachers who influenced him, I noticed that several math teachers were on his list.) Awards were presented to many deserving individuals, and outstanding teachers were recognized for their accomplishments.

My favorite part of the conference is always the camaraderie and sharing, both formal and informal, that happens every time math and science teachers get together. You can relive some of the conference highlights via the *Conference Photos* link on the sdctm.org website. Maybe you are even in some of the pictures!

In many ways, the annual conference is like Christmas for me: months of preparation and planning; excitement and anticipation; family coming in from far and wide; great conversations and time to catch up; even wondering whether everyone will make it in spite of the weather. And the gift: spending time renewing our spirits. It's a grand holiday!

And then the inevitable after-Christmas let-down arrives. The party is over for another year. The company goes home and it's time to vacuum up the pine needles from the carpet. I had that feeling when I came back to my classroom on Monday. I could barely see my desk underneath the piles of work waiting for me. When I miss two days, it takes me at least a week to catch up again. Is it that way for you too?

How do I work my way out of the after-Christmas blues? I just remind myself of the reason that I am behind in my work. It was worth it. I can't wait to try the new activities that I heard about. I'm looking forward to trying some new approaches in algebra. I feel re-energized and ready to face my most skeptical students. I even picked up a few more math jokes.

I cannot adequately express my appreciation to those who braved the weather to make the conference a success. Thank you to all who presented sessions, and/or attended in spite of the adverse conditions. A huge thank you to members of the executive boards of both SDCTM and SDSTA! The conference would not happen without the extraordinary efforts of this fantastic team. You have proven yet again the quality and dedication of South Dakota's educators.

The weather outside was frightful, but the conference was delightful!

Cindy Kroon
SDCTM President

SPRING 2010

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Inside this issue:

Calendar Notes:

- *PAEMST Applications due May 1, 2010*
- *SDCTM/SDSTA Joint Conference February 3—5, 2011*

Becky Kitts, 2008 PAEMST Awardee

"..It was exciting to learn that South Dakota is a front runner in the use of technology and professional development opportunities."

Since winning the 2008 PAEMST award, my professional life has been a whirlwind. The nomination process, the anticipation of finding out who the winners from South Dakota would be and then the anticipation of the trip to Washington, D.C. have been a focal point of the past two years. Additionally, since receiving this prestigious award, I have been asked to speak at many functions. It is always exciting to speak to others about my passion…teaching math.

The trip to D.C. was an unforgettable professional experience. There were a variety of inspirational speakers ranging from the Secretary of Education, Arne Duncan, to National Science Foundation speakers, and even President Obama.

While in DC it was very interesting sharing teaching experiences with others from around this great nation. In comparison to other states, it was exciting to learn that South Dakota is a front runner in the use of technology and professional development opportunities. One teacher even stated she was going back to her state to tell others that they need to "catch up" to South Dakota.

Winning this award and the trip to D.C. has inspired me to become the best I can be and to assist my coworkers to do the same. For the good of the students we need to keep striving to teach cognitively guided instruction and to assist the students in becoming "thinkers" and problem solvers". I didn't win the award because I am a great math teacher…I won the award because my students are wonderful math students and make teaching fun!

Becky Kitts
2008 PAEMST awardee

Daktronics selects Cindy Kroon as Outstanding Math Teacher

"…

(She is) a leader in experimenting and utilizing new technology."

Cindy Kroon, a high school teacher at Montrose, has been honored with the 1st annual Daktronic's South Dakota Outstanding Mathematics Teacher Award. Cindy has been teaching mathematics at Montrose for 29 years. Her principal describes her as a leader in experimenting and utilizing new technology such as graphing calculators and smart boards. By using songs and puzzles, she makes math fun for her students and her students in turn respect her and respond to her guidance and leadership. A parent described Cindy as a teacher who awakened the love of mathematics in their daughter to the extent that she is now majoring in mathematics. Cindy has also been an active participant in many professional organizations and is currently the president of the SD Council of Teachers of Mathematics. She has won several previous awards, including the 2001 Presidential Award for Excellence in Math and Science Teaching. As the winner of this award, the Montrose Mathematics Department receives a check from Daktronics for $1000.

Nominations for 2010 PAEMST

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

We're looking for outstanding K-6 math teachers for the 2010 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, 2010. **For more information, including nomination and application forms, please visit www.nsf.gov/pa or www.sdctm.org and click on the awards link.**

Nominate an outstanding elementary teacher for 2010 PAEMST.

Area Math Competitions

Many SD universities offer a competition for high school math (and sometimes science) students. I have gathered dates and contact information for some. If you know of others (or if yours is not included) please contact me and I'll be happy to include them in the next issue.

Location	Date	Contact Information	
SDSU	October 31, 2009	Don Struck	donald.struck@sdstate.edu
NSU	April 14, 2010	Dr. A. Elkhader	elkhadea@northern.edu
USD	April 24, 2010	Sandi Shumaker	sandi.shumaker@usd.edu
SDSMT	May 10, 2010	Julie Dahl	julie.dahl@sdsmt.edu

NASA Mission Educator Fellowship Opportunity

Bring the Solar System to Your Community - Become a MESSENGER Fellow

"Take part in the golden era of Solar System exploration!"

Take part in the current golden era of Solar System exploration by becoming a MESSENGER Educator Fellow! As an integral part of NASA's MESSENGER mission to Mercury, the Fellows will help bring the excitement of this daring mission to classrooms across the nation.

== What is MESSENGER? ==

Humankind is sending a spacecraft back to Mercury! NASA's MESSENGER (MErcury Surface, Space ENvironment, GEochemistry, and Ranging) is only the second spacecraft ever to visit, and will be the first to orbit, this enigmatic planet. Launched in 2004, the robotic spacecraft flew by Mercury three times in 2008 and 2009, sending back the first pictures of the previously unseen side of the planet. In March 2011 MESSENGER will go into orbit around Mercury and begin a year-long, comprehensive study of the planet. The mission will not only dramatically increase our understanding of Mercury, but also help reveal the story of the Solar System's formation.

How would you like to help take the nation along for this thrilling ride as a MESSENGER Educator Fellow? Visit http://MESSENGER.jhuapl.edu for more information on the mission, and http://messenger-education.org for more information on the education and public outreach efforts of the mission.

== What is a MESSENGER Educator Fellow? ==

"Applications must be received by April10, 2010."

An essential part of the MESSENGER education and public outreach program is a nationwide teacher training initiative whereby a cadre of thirty Fellows - master science educators - conduct teacher training workshops nationally, training up to 27,000 grades preK-12 educators over the mission lifetime. Fellows train educators on education materials (termed MESSENGER Education Modules) developed by the MESSENGER education and public outreach team. To date, over 14,000 educators across the nation have been trained by the MESSENGER Educator Fellows. Taking part in the MESSENGER Educator Fellowship Program is a great opportunity for educators to make a broad, yet profound impact in science education in the preK-12 community.

To view the Announcement of Opportunity online, visit:
http://messenger-education.org/teachers/MEFP-AO-2010.pdf
To view and print an application form, visit:
http://messenger-education.org/teachers/application.pdf

Applications must be received by April 10, 2010. Fellow selections will be announced by May 15, 2010. The training workshop is scheduled to take place July 6-10, 2010. For any questions about the Fellowship program or the application process, please contact HarriVanhala@ncesse.org

Grip's Rant: Algebra War

No, this post isn't about the right way to teach algebra or even when algebra should be taught. Rather this post is about a bell ringer activity that I have found to be useful. The activity is a based upon the simple card game war: each person flips a card over and the one with the larger card wins both cards. We play a variation of the game in class. One person is has card x and the other person has card y. I put an algebraic expression on the board such as , , , $x^2 + y^2$, or. I also have them solve one-step equations such , etc. Each face card is 10, each ace is 1, jokers are zero, reds are negatives and black is positive. They play similar to war, with the person who says the correct answer first takes both cards. Wrong answers aren't punished. The mentally taxing part is they must do all of the calculations mentally, no paper, no pencil and no calculator. They can only say the final answer, they can't work it out verbally. Oh the horror! I have had students tell me that they need to verbalize the process. This is a great way talk to them about why they don't show their work on much harder problems.

We played the game yesterday. I couldn't believe what I heard when I told them to clear their tables and handed out the cards. In each class I heard at least a couple of times, "Oh I love this game." A little competition, a little fun. I had a couple of students yelling their answers and laughing. (Sorry teachers next door!)

This got me thinking. What would the reaction have been if I had announced, "Today, we are going to practice mental math." The reaction would have been quite different. I would have silently groaned with the students. Gaming and education have had quiet a few of articles on it in the past few years. Truthfully, I tend to ignore these fads. I remember when I first started teaching, there were software companies that would have the students solve some math problems and then they would *get* to play a game. Nice message. Do some of these boring math problems and then you get to do something fun! Creating another generation of people who hate math. Taking a subject that describes the world in which we live and reducing to something that is plain boring.

Whenever I approach using a game in the classroom the major factor has always been that it must be the mathematics first. This is the prerequisite for anything that I approach in the classroom. I thought I had found it when I was introduced to cognitive tutor a few years ago. I loved it, but because of the unforgiving nature of the way the students typed in their answers students and their parents hate it.

The other day I received an unsolicited email from mangahigh.com. From the brief time that I played with it, they appear to get it. The math is embedded within the game. They gave a me two week free subscription to the full site and the main site is free! I have to put my students into their system this weekend. We will see how it goes next week.

Bill Gripentrog
Watertown High School
SDCTM Past President

http://www.facebook.com/l.php?u=http%253A%252F%252Fgripsrant.blogspot.com%252F2010%252F02%252Falgebra-war.html&h=b29d6dfbe5dd3c68d3fd788d8ee25166&ref=nf

"This...isn't about the right way to teach algebra or even when algebra should be taught…"

Grip welcomes your comments.

DRAFT K-12 COMMON CORE STATE STANDARDS AVAILABLE FOR COMMENT

NGA Center, CCSSO Release First Official Public Draft

WASHINGTON The National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO) today released the first official public draft of the K-12 standards as part of the Common Core State Standards Initiative, a process being led by governors and chief state school officers in 51 states, territories, and the District of Columbia. These draft standards, developed together with teachers, school administrators and experts, seek to provide a clear and consistent framework to prepare our children for college and the workforce.

"...encourage those interested in the standards to provide feedback by Friday, April 2, 2010."

The NGA Center and CCSSO have received feedback from national organizations representing, but not limited to teachers, postsecondary education (including community colleges), civil rights groups, English language learners, and students with disabilities The NGA Center and CCSSO encourage those interested in the standards to provide further feedback by Friday, April 2, 2010, at www.corestandards.org.

We are pleased to release the K-12 standards today and to begin reviewing comments from the public, said **Dane Linn, director of the NGA Center's Education Division.** These standards build upon the goals articulated in the college- and career-readiness standards released last year and will ensure our students are prepared to compete and succeed in a global economy. We look forward to working with educators, leaders and state board members in the states as they consider adopting these standards that will guide their educational programs.

The feedback and comments states and our additional stakeholders have provided us are solidifying these standards into the better standards our students need, stated **Gene Wilhoit, executive director of CCSSO**. We will continue to work diligently and tirelessly to ensure these standards are where they need to be, and today we are asking the public to help us do just that.

These standards define the knowledge and skills students should have within their K-12 education careers so that they will graduate high school able to succeed in entry-level, credit-bearing academic college courses and in workforce training programs. The standards are:

- Aligned with college and work expectations;
- Clear, understandable and consistent;
- Include rigorous content *and* application of knowledge through high-order skills;
- Build upon strengths and lessons of current state standards;
- Informed by other top performing countries, so that all students are prepared to succeed in our global economy and society; and
- Evidence- and research-based.

"The standards are expected to be finalized in early Spring."

The standards are expected to be finalized in early Spring. For more information, visit www.corestandards.org.

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Founded in 1908, the National Governors Association (NGA) is the collective voice of the nation's governors and one of Washington, D.C.'s most respected public policy organizations. Its members are the governors of the 50 states, three territories and two commonwealths. NGA provides governors and their senior staff members with services that range from representing states on Capitol Hill and before the Administration on key federal issues to developing and implementing innovative solutions to public policy challenges through the NGA Center for Best Practices. For more information, visit www.nga.org.

The Council of Chief State School Officers (CCSSO) is a nonpartisan, nationwide, nonprofit organization of public officials who head departments of elementary and secondary education in the states, the District of Columbia, the Department of Defense Education Activity, and five U.S. extra-state jurisdictions. CCSSO provides leadership, advocacy, and technical assistance on major educational issues. The Council seeks member consensus on major educational issues and expresses their views to civic and professional organizations, federal agencies, Congress, and the public. www.ccsso.org.

Grant for K-12 University Collaboration

K-12 Math teachers and counselors,

Here is information about possible funding for a K-12 enrichment programs for talented students in middle school or high school. I don't know if any of you have ideas you've been tossing around, but this might be a good time to think about some kind of collaboration. If you have ideas of collaborations you would like to establish with SDSU, please let me know and I can help you identify someone here that has a similar interest and would be interested in working with you.

Thanks,
Donna Flint
Undergraduate Program Coordinator
Dept. of Math/Stat
SDSU

The MAA, through funding from the Mary P. Dolciani Halloran Foundation, is pleased to announce a new grant program for mathematical enrichment programs for talented high school and middle school students. Many of you may already run such a program, might like to start one, or have colleagues who are involved in such endeavours.

The Mary P. Dolciani Halloran Foundation has provided funding for the Mathematical Association of America (MAA) to award grants for projects designed to develop mathematical enrichment programs for talented students in middle school or high school. The goal of the program is to interest students who are ready for more challenge in the study of mathematics and encourage them to further their mathematical studies. Projects should provide enrichment and extension activities for students which lead to heightened interest in and appreciation of mathematics. The projects should encourage students to continue studies of mathematics in high school and college and should better prepare them for those studies.

Proposals are sought from college and university mathematical sciences faculty working in partnership with middle and/or high school mathematics teachers. Interested middle and high school teachers are strongly encouraged to seek out college and university mathematical sciences faculty in the formulation of proposals to benefit middle and high school students; the Foundation is particularly interested in projects originating from the middle or high schools.

Grants will be up to $6000 and will be made to the college or university of the project director for a one-year project. To provide maximum flexibility, unexpended funds may be carried forward. Some grants may be renewed up to a maximum of three years.

Deadline for Proposals is 15 April.
More detailed information is available on the program webpage www.maa.org/dolciani

"...to announce a new grant program for mathematical enrichment programs..."

"Deadline for Proposals is 15 April, 2010

An Alternative Form of the Quadratic Formula

Bob Schuh – McIntosh School

A few years ago I had foreign exchange student from Japan that used a different form of the quadratic formula. She used this formula whenever the coefficient of the linear term was an even integer with the equation written in standard form, $ax^2 + bx + c = 0$. She simply divided the coefficient of the linear term, b, by two and used that value for b_o in the following formula:

$$x = \frac{-b_o \pm \sqrt{b_o^{\,2} - ac}}{a}, \text{ where } b_o = \frac{b}{2}$$

Example: Given that $3x^2 - 4x - 15 = 0$

$$b_o = \frac{-4}{2} = -2$$

$$\text{Then } x = \frac{-(-2) \pm \sqrt{(-2)^2 - (3)(-15)}}{3}$$

$$x = \frac{2 \pm \sqrt{4 + 45}}{3}$$

$$x = \frac{2 \pm 7}{3}$$

$$x = 3 \text{ or } x = \frac{-5}{3}$$

The previous formula is easily derived using the quadratic formula as follows:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$\text{Let } b_o = \frac{b}{2} \Rightarrow b = 2b_o$$

Substituting $2b_o$ into the quadratic formula we have the following equation:

$$x = \frac{-2b_o \pm \sqrt{(2b_o)^2 - 4ac}}{2a}$$

$$x = \frac{-2b_o \pm \sqrt{4b^2{}_o - 4ac}}{2a}$$

$$x = \frac{-2b_o \pm \sqrt{4}\sqrt{b^2{}_o - ac}}{2a}$$

$$x = \frac{2\left(-b_o \pm \sqrt{b^2{}_o - ac}\right)}{2a}$$

$$\therefore x = \frac{-b_o \pm \sqrt{b^2{}_0 - ac}}{a} \text{ where } b_o = \frac{b}{2}$$

If the coefficient of the linear term is odd and one wishes to avoid fractions, you can multiply both sides of the equation by two.

I present this formula only as an activity to some of my classes. I do not require my students to learn this formula. I am pleased if when they remember the normal quadratic formula.

It should be noted that the Japanese student liked using this formula since there was less multiplication involved and they were not allowed to use calculators in her school.

Teach Your Students "Organized Factoring" and They May Never Ask For Help to Factor a Trinomial Again.

Bob Schuh – McIntosh School

I will explain the procedure using two examples.

Example 1: Factor $6x^2 - 23x + 7$
Multiply the leading coefficient times the constant term
$6 \times 7 = 42$
Make a table showing all of the factor pairs of 42.

42	
1	42
2	21
3	14
6	7

Since the sign of the constant term is "+", use a pair of numbers whose **sum** is 23. The numbers whose sum is 23 are 2 and 21. Since the sum of these number must be -23, we use -2 and -21 to express -23x as -2x + -21x and rewrite the trinomial as follows.

$$6x^2 - 2x + -21x + 7$$

Group the first two terms and the last two terms.

$$\left(6x^2 - 2x\right) + \left(-21x + 7\right)$$

Factor the GCF out of each group.

$$2x\left(3x - 1\right) - 7\left(3x - 1\right)$$

Factor $\left(3x - 1\right)$ out of the expression.

$$\left(3x - 1\right)\left(2x - 7\right)$$

The factorization is complete.

Example 2: Factor $6x^2+13x-5$

Multiply the leading coefficient times the constant term.

$6\times 5=30$

Make a table showing all of the factor pairs of 30.

30	
1	30
2	15
3	10
5	6

Since the sign of the constant term is "$-$", use a factor pair whose **difference** is 13. The numbers whose difference is 13 are 15 and 2. Since the difference of these numbers is 13, we will express $13x$ as $15x+-2x$ and rewrite the trinomial as follows.

$$6x^2+15x+-2x-5$$

Group the first two terms and the last two terms.

$$\left(6x^2+15x\right)+\left(-2x-5\right)$$

Factor the GCF out of each group.

$$3x\left(2x+5\right)-\left(2x+5\right)$$

Factor $\left(2x+5\right)$ out of the expression.

$$\left(2x+5\right)\left(3x-1\right)$$

The factorization is complete.

Journal Writing and Summarization
Chapter 8 Requirements

Layered Curriculum
Gloria Vavra
Wessington Springs High School
Wessington Springs SD

Your assignment is to complete the following activities on Chapter 8, Exponents and Exponential Functions.

The layering for this journal project will be as follows:

-You have to get the 40 Points from Layer C to move to Layer B
-You have to get the 30 Points from Layer B to move to Layer A
_You have to get 30 Points in Layer A

Fill out the attached score sheet and total to receive your credit.

Layer C: Basic Note taking and Lecture Participation

-You must earn 40 points in Layer C

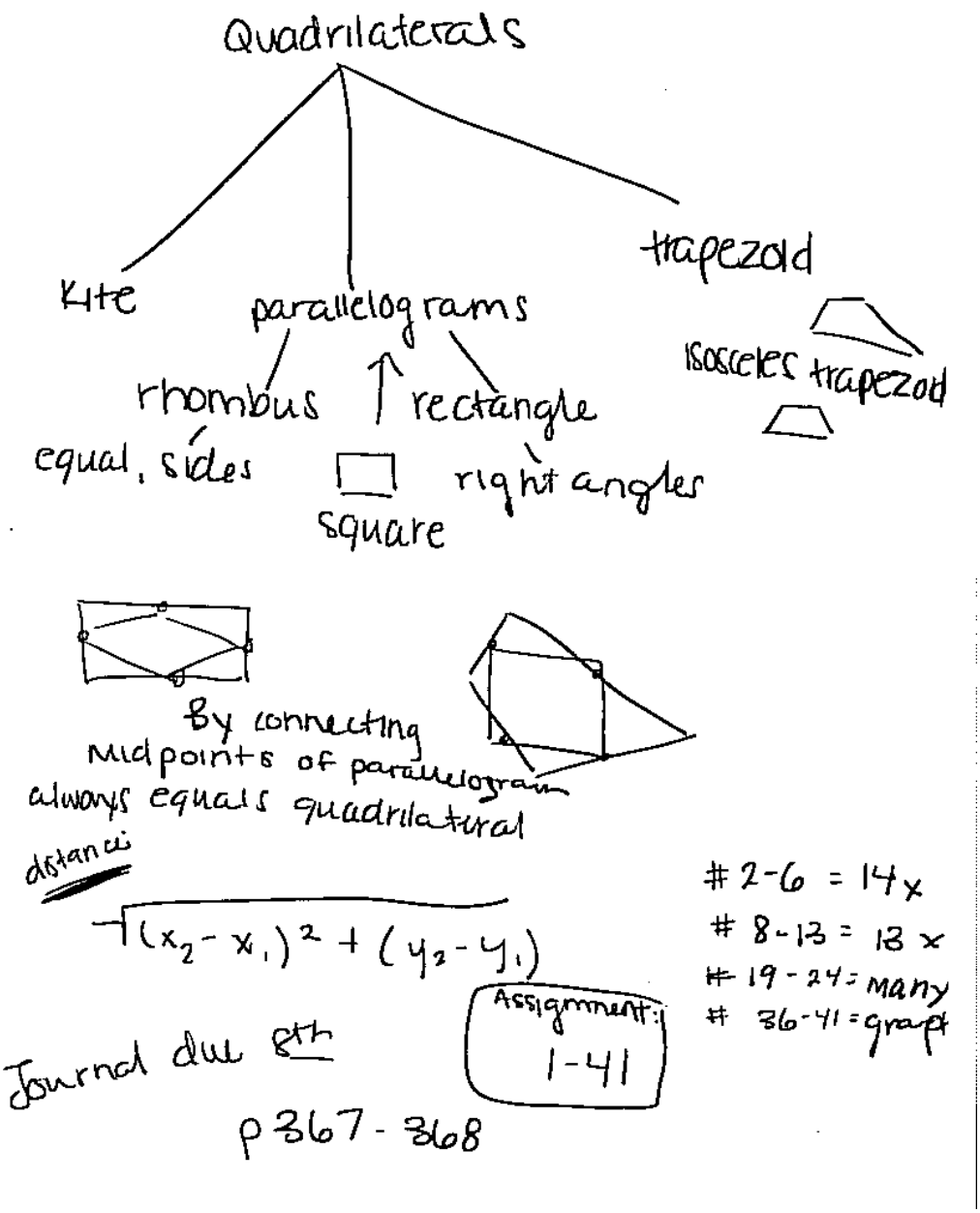
Required:

_____ 1. Seven sets of notes must be taken during lecture (20 pts.)
_____ 2. A 5 -7 Sentence Summary must be written over notes (10 pts.)

Your Choice:

_____ 3. Create a vocabulary Worksheet (5 pts.)
_____ 4. Make Illustrations of Key concepts (5 pts.)
_____ 5.

Students take notes using the Tablet computers and then are required to type up/summarize their notes. The following is a partial student sample:



Squares can be included as rhombuses and rectangles, which are included as parallelograms. Isosceles trapezoids can be included as trapezoids. Trapezoids, parallelograms, and kites are all included as quadrilaterals. The new figure is called the image and the original figure is called the preimage. When the preimage is mapped onto the image it is called a transformation. The three most basic transformations are reflections, rotations, and translations. An isometry is a transformation that preserves lengths, angle measures, parallel lines, and distance between points. When the transformation acts as a mirror it is called a reflection, and the mirror is called the line of reflection. A rotation is a transformation in which a figure is turned about a fixed point. The fixed point is the center of rotation. Rays drawn from the center of rotation to a point and its image form an angle called the angle of rotation. A figure in the plane has rotational symmetry if the figure can be mapped onto itself by a rotation of 180^ or less. A translation is a transformation that maps every two points P and Q in the plane to points P' Q'. A vector is a quantity that has both direction and magnitude or size and is represented by an arrow drawn between two points. The initial point the starting point, the terminal point the ending point. Component form combines the horizontal and vertical components of a vector. A glide reflection is a transformation where it is slide, then reflected. When two or more transformations are combined it is called a composition.

College Freshmen Math Placement

Hello High School contacts!

I have a document with 7 SDSU placement messages which you might like to share with your students. This information is also available at: http://learn.sdstate.edu/flintd/placement.htm.

My experience during summer orientation is that students are often surprised when they are required to take a math placement exam. Though the information is included in their orientation packet, many think that this won't apply to them.

I know that SDSU is not the only college your students will be considering, so the first message is a suggestion that students check with their colleges before arriving at orientation to get their specific placement process. Every placement process is a little different, but most do require students to take some kind of placement test at orientation, so they should be prepared for that.

If you know of anyone who would like to have access to this information, please feel free to forward this message to them, or if you send me their e-mail address, I can add them to my list.

"...Every placement process is a little different, but most do require students to take some kind of placement (test) at orientation."

Thanks,
Donna

Donna L. Flint, PhD
Professor and Undergraduate Program Coordinator
Department of Mathematics and Statistics
South Dakota State University
(605)688-6203
http://learn.sdstate.edu/flintd/

Modeling Physics 2010 - Making Learning Engaging

Join us for two weeks in the beautiful Black Hills for a course that will help you engage your students and make science & math meaningful to them!

Teachers of physics, physical science, chemistry, or math in grades 9-12 are encouraged to apply. Teams of science and math teachers from the same school are particularly encouraged. A stipend bonus will be given to members of school teams including a science teacher and a math teacher. Our goal is to give science and math teachers ways to coordinate what they do. The modeling materials can easily be adapted to other science and math topics.

"Teachers of physics, physical science, chemistry or math in grades 9-12 are encouraged to apply."

Dates: July 12-16 & July 19-23 at Black Hills State University (Tentative)
Stipend: $600 + $120 for follow up sessions
Housing & meals provided to teachers outside of commuting range.
Teachers receive a classroom set of Vernier's Graphical Analysis software.
Taught by Modeling Experts Rose Emanuel & Roberta Traxinger, and by Dr. Andy Johnson of CAMSE.
To apply: contact Mary Burket 605-642-6804 Mary.Burket@bhsu.edu
For more info on the course, contact Dr. Andy Johnson at andy.johnson@bhsu.edu 605-642-6508

The acclaimed Modeling Method is in use in high school classrooms across the US. Teachers use it because it works. http://modeling.asu.edu/index.html

3 graduate credit hours available for the low price of $129.60. An additional hour will be offered for two school year follow up sessions.

Print a copy of this form. Mail with check payable to SDCTM to:

Diana McCann
31133 Bon Homme Road
Tabor, SD 57063

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 / Junior High $20.00
_____ High School $20.00
_____ Post Secondary $20.00
_____ Retired $5.00
_____ Student $5.00

SDCTM Newsletter
C/o Sheila McQuade
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