Attend the 36<sup>th</sup> Annual Convention in Fort Collins, Colorado



#### ADOPT A CHAPTER

Hurricanes have hit many of our schools both last year and this year. Katrina, as you all know, devastated areas of Louisiana, Mississippi, and Texas. We have schools that have closed, many will open for the first time this school year in October or later, and many have accepted hundreds of displaced students from other areas. We have contacted a number of our schools with extreme needs. Many students are returning to school but have lost everything they own, their home, and some have lost loved ones. Schools are requesting help with student supplies: pens, pencils, notebooks, paper, backpacks, etc. Some schools cannot do fundraising this year and are looking for monetary help to get their students enrolled in Mu Alpha Theta or their state organizations and for funds to get students to competitions. If your school would like to adopt a chapter, please email Kay Weiss at <u>matheta@ou.edu</u>. She will put you in contact with the sponsor at a chapter that needs help. If your school needs help, please let us know.

#### **NEWS FROM THE PRESIDENT**

My name is Mary Emma Bunch and I am delighted to be serving as your president for the next two years. I have been associated with Mu Alpha Theta since 1979 when I started the Farragut High School Chapter in Tennessee. I served as sponsor for that chapter through May of 2003. Now I am looking forward to having the opportunity to work with all the Mu Alpha Theta Chapters in the national organization.

New on the Executive Board is Carol Botzner from Ohio as Governor of Region IV. She is serving out the term for Mary Rhein who lost her battle to cancer this summer.

This is an election year for positions on the Mu Alpha Theta Governing Council, our Board of Directors. Positions to be filled are President-Elect and Governors from Regions III and IV. As a sponsor, if you are interested in running for office or know of anyone who has expressed an interest in running, please contact a member of the nominating committee. The committee members are Susan Hiller at <u>susiehiller@bellsouth.net</u> and Tom Tosch at <u>tomtosch@wamath.net</u>.

The Ala Moana Hotel in Honolulu, Hawaii was the site of the 35<sup>th</sup> Mu Alpha Theta National Convention August 1-6. It was an exciting and enjoyable convention with a nice mix of competitions, speakers and activities. A special thanks goes to the Kamehameha High School convention hosts, Calvin Fukuhara, Kimlynne Slagel, Elizabeth Motoki and Lawrence Park and their students for a job well done.

For the second year sponsor committee meetings were held at the National Convention. Sponsors are needed to serve on these committees during the school year, to follow through with some of the ideas that were discussed at the conventions. The committees will function via email so the time involved will be limited. The committees and some of the ideas are: 1. Strategic Planning-to determine more effective ways to meet the needs of the sponsors and members, determine one or more new student awards, and develop By-laws for the Constitution; 2. Membership-to determine if our regions are equally represented, to develop ways to encourage members to participate in more of the National MA $\theta$  activities, and to determine other services that need to be provided to the MA $\theta$  members; 3. Newsletter-determine ways to get information from local chapters to put in the newsletter, get information from each region for the newsletter, determine what type information the members would like to have in the newsletter. If you are interested in serving on one of these committees, please contact me at <u>matheta@ou.edu</u>.

There are some changes this year in the free competitions sponsored by MA0. The **Rocket City Math League** sponsored by Grissom High School in Huntsville, Alabama will have four divisions instead of two. The divisions will be Pre-Algebra/Algebra I, Geometry, Algebra II and Pre-Calculus/Calculus. You might encourage your middle school feeder schools to participate in this competition. Students do not have to be MA0 members to compete in this league. Information about this contest and how to register for it is available at <u>www.mualphatheta.org</u> under contests or at <u>http://www.rocketcitymath.org/</u>.

The Log 1 Contest, sponsored by Mu Alpha Theta, is free for its members. Your MA $\theta$  Chapter must register to participate. This year the contest will be run by Maplesoft and will be conducted online using Maple T A. Each test will have three levels: Mu, Alpha and Theta. This should be an innovative contest for your members. A description and registration information for this contest is available at <a href="http://www.mualphatheta.org/Contests/MAO\_Contests\_Write\_In.htm">http://www.mualphatheta.org/Contests/MAO\_Contests\_Write\_In.htm</a>.

Mu Alpha Theta will continue to recognize students doing challenging, thorough and creative projects involving mathematics at the International Science and Engineering Fair (ISEF). As a result of the certificates awarded to competitors at Regional ISEF and a monetary award at the ISEF competition, some international schools have requested chapters in Mu Alpha Theta. We hope to have the opportunity to meet some of the members of these new chapters at our next national convention.

The 36<sup>th</sup> National Mu Alpha Theta Convention will be held in Fort Collins, Colorado-July 16-21, 2006. The co-chairpersons for the convention, Sue Doker and Thom Morris, have planned an excellent convention. You can find the registration packet on line at <u>www.mualphatheta.org</u>. Be sure to look closely at the information for the **da Vinci Award on page 7** of the packet. Students who wish to compete for this award will need to start working on it soon. If your chapter has never attended a National Convention, let this be the year that you go. Apply for one of the 12 Convention Grants to the help you get to the convention. These include free registration for two people and up to \$500 for transportation.

It is my pleasure to welcome you to an exciting year for Mu Alpha Theta. If you have any suggestions, questions or concerns, feel free to contact me at <u>mmbear@comcast.net</u>.

Mary Emma Bunch President, National Mu Alpha Theta

#### National Convention

Fort Collins, Colorado is the location of the 36<sup>th</sup> Annual Mu Alpha Theta National Convention, from July 16<sup>th</sup> through 21<sup>st</sup>, 2006. The Convention is being jointly hosted by Thom Morris from Berkeley Preparatory School in Tampa, Fl and Sue Doker from Lincoln High School in Tallahassee, Fl. Fort Collins is located about 5000 feet above sea level and boasts beautiful views of the Rocky Mountains and the Cache La Poudre River. Usual temperatures this time of the year are between the 80s to low 90s during the day and between the 50s-60s at night. With a fairly low humidity level and constant light breeze, temperatures feel comfortable, especially in the shade. This great weather can only add to what should be a really enjoyable competition. Participants will be treated to an outing in Estes Park, giving students time to relax from the competition and enjoy the Rockies.

Transportation will be provided to Fort Collins by bus from the Denver International Airport. The usual contests will take place including Topic Tests, Posters, Chalk Talk, Scrapbook, Quizzle, Interschool, and School Bowls. There will also be innovative, exciting new tests including a Codes test, a Mystery test, and a "What Would da Vinci Do?" test. An added highlight of this year's competition will be the announcement of the winner of the daVinci Award with its \$2500 college scholarship prize.

The daVinci Award will be offered for the first time at the 36<sup>th</sup> Annual Mu Alpha Theta Competition. Anyone in Mu or Alpha division may participate, but they must follow a strict set of testing. This includes the individual tests, Ciphering and Topic Tests; as well as 2 new tests for the year, Proofs and "What would da Vinci do?"; ChalkTalk; and finally the original project. The original project may be a written essay, a drawing, a design, or a constructed item that shows a large amount of creative insight into different applications of mathematics. One example of a project is a drawing of an individual's desk twenty years in the future. If a person would like to create an essay rather than an artistic drawing, the written project should be at least 1,000 words long. Every project should be completed and sent to Thom Morris by June 1<sup>st</sup>, 2006 (address is located in sponsor packet). When all the projects have been completed and judged, and the entire package completed, a student who is deemed the most worthy of the award will receive a \$2500 scholarship to the college of their choice.

#### Greetings from Region IV:

The school year has gotten off to a fast start. I would like to welcome three new schools to Mu Alpha Theta. They are Cranbrook Kingswood Upper School from Bloomfield Hills, Michigan, Pinewood Preparatory School from Summerville, South Carolina and Charles Herbert Flowers High School from Springdale, Maryland. At Lakota Local Schools we are busy planning for a Region IV Competition on December 9<sup>th</sup> and 10<sup>th</sup>. Any Region IV schools interested in attending can find competition information and registration forms at http://www.lakotaonline.com/west/mu/index.htm. Our thoughts and prayers are with the chapters along the Gulf Coast, may the remainder of the year bring you only good things. Carol Botzner (Region IV Governor) page 2, Fall 2005 Newsletter

#### National Officers: President: Mary Emma Bunch 713 Hardwicks Drive Knoxville, TN 37923 mmbear@comcast.net Past-President Susan Hiller Vero Beach HS Vero Beach, FL 32960 susiehiller@bellsouth.net Secretary-Treasurer: **Paul Goodey** University of Oklahoma Norman, OK 73019 pgoodey@mathou.edu Governor Region I: **Tom Tosch** Mount Rainer High School Des Moines, WA 98198 tomtosch@wamath.net **Mattie White** Governor Region II: Beniamin Franklin HS New Orleans, LA 70122 mattiewmathII@aol.com Governor Region III: Susan Doker Lincoln High School Tallahassee, FL 32311 DokerS@mail.leon.k12.fl.us Governor Region: IV: **Carol Botzner** Lakota West HS West Chester, OH 45069 carol.botzner@lakotaonline.com MAA Representative: **Steve Dunbar** University of Nebraska Lincoln, NE 68588 sdunbar1@unl.edu NCTM Representative: Dr.Irina E. Lyublinskaya College of Staten Island Staten Island, NY 31014 http://discovery.csi.cunny.edu Terry Herdman SIAM Representative: ICAM 0531 Blacksburg, VA 24061 herdman@origin2.icam.vt.edu **Rob Farinelli** AMATYC Representative: College of Southern Maryland La Plata, MD 20646 rfarinelli@csmd.edu Executive Director: **Kav Weiss** University of Oklahoma Norman, OK 73019 matheta@ou.edu National Student Officers: President: Cristina Munoz Fort Myers High Fort Myers, FL JTCMunoz@aol.com Vice-President: Tyler McKay Thomas Jefferson High Auburn, WA tmckay8@comcast.net Secretary/Treasurer: Stephen Repar Lafayette High School Lafayette, LA thegrimrepar@gmail.com Parliamentarian: Matt Sunderland Hunter College HS New York, NY gatewaycat@gmail.com

### National Office News from Kay:

We are hoping that more of our sponsors will take advantage of our online order system this year. You can order both certificates and merchandise online and pay for them with a purchase order number, check number, or credit card. Instructions are included in this newsletter for your convenience. Names can be entered by cutting and pasting from a Word document or Spreadsheet. If you don't know your chapter ID or password, just email or call Kay at matheta@ou.edu or 405-325-4489. We also would like to have an email address for every sponsor. These can be entered or updated online. To receive the latest information, sign up for the listserve by subscribing to mualphatheta-subscribe@topica.com. Watch the bottom area of our homepage at www.mualphatheta.org for updates and current information helpful to all sponsors. Pictures from the Hawaii convention are posted. Everyone that attended had an experience that will last them a lifetime and the Colorado convention is going to be outstanding! Plan on joining us next summer. Haven't been to a convention? Apply for a Convention Grant.

The National Office is open Monday through Fridays from 9:30 am - 6:00 pm, CST. We close during national holidays, as well as during Thanksgiving, Nov. 23 - Nov 28, and the National Convention, July 15 - 25. Other times when Kay is out of the office, we try to staff with student help to take messages, send out orders, and answer questions. We are hoping to find more permanent office staff this year to better serve your needs. Kay will be out of the office presenting at the AMATYC Convention, Nov. 10 - 16. She will be at the NCTM Convention in St.Louis, April 26 - May 2. If you are attending either convention, please introduce yourself. It is nice to have a face to match the voice on the other end of the telephone.

This spring is election time for Mu Alpha Theta, as Mary Emma mentioned. Please watch for your ballot and vote online when it arrives. Your vote is important to us! If you have thought about donating some time to the National organization, please call to ask me about the benefits of serving on the Governing Council.

## Welcome from the National President of Mu Alpha Theta Student Delegation Cristina Munoz

It's already September and we are gearing up for another exciting year of competition. The National Convention this past summer was held in Honolulu, Hawaii and was a great success thanks to the efforts of Calvin Fukuhara, Kim Slagel, Elizabeth Motoki, Lawrence Park, and many others who contributed. This year, the student delegation is working to promote Mu Alpha Theta in regions with few chapters, especially Region 1 (Utah, Nevada, Arizona, and the American West).

Mu Alpha Theta has been growing internationally with our sponsorship of a math award for International Science Fairs. For the first time, schools around the world have expressed an interest in attending our next convention. We have inquires from chapters in Riyadh, Saudi Arabia; Seoul, South Korea and Tbilisi, Republic of Georgia. With hard work and meticulous organization, we hope our next convention will be as successful as the last.

Also at the Hawaii convention, the student delegation carefully reviewed nominations for the Sister Scholastica Award. After pensive deliberations, we bequeathed the award to Sam Koski from Miami Springs Senior High School. Congratulations Sam and to the students who invested their time to compile the nomination. If students wish to nominate a sponsor, they can find information on the Mu Alpha Theta website under Awards.

Additionally, the student delegation is currently in the process of updating our website, restocking it with up-to-date information and making it accessible to anyone with comments and suggestions for our student delegation.

At next year's Convention, new tests and scholarship opportunities will be available. Information on the da Vinci Contest are included in the Sponsor's Packet online at www.mualphatheta.org. I am enthusiastic for our upcoming year and wish you all the best of luck. I hope to see you next summer in Fort Collins!

# **'ONSOF**

Mu Alpha Theta is looking for volunteers to help run a National Summer Convention. Sponsors can act as a Host, work as the Test Coordinator, or as a Convention Planner. Each position comes with a \$5000 stipend to thank you for your time and effort. Information can be found online at: http://www.mualphatheta.org/National Convention/MAO Host a Convention.htm

or contact Kay Weiss for details and position responsibilities at matheta@ou.edu.

# Thank You to Retiring Sponsors

The following teachers have retired as Mu Alpha Theta Sponsors during the past school year. Our thanks to these dedicated teachers.

Fairfield Warde High School, Fairfield, CT: Patricia Daley 6/04 Warren Central High School, Vicksburg, MS: Kathryn Duggins 6/04 Thomas Jefferson High School, San Antonio, TX: Alma Aguirre 6/05 Governor's School of Science and Math, Hartsville, SC: Drs. Terry and Nancy Long 12/04

Palm Harbor University HS, Palm Harbor, FL: Renee Fish 06/04 Somerset Area SR. High School: Lou Bruno 6/04 L.D. Bell High School, Hurst, TX: Kay Nelson 6/05 Central High School, Philadelphia, PA: Jay Warshaw Poquoson High School, Poquoson, VA: Nancy Gore 6/05 St. Albans High School, St. Albans, WV: Linda Davis 6/05 McCook High School, McCook, NE: Karen Miller 6/05 Scotland High School, Laurinburg, NC: Jane R. Barnett 6/05 Hewitt-Trussville High School, Trussville, AL: Reba Williams 6/05 L.D. Bell High School, Hurst, TX: Kay Nelson 6/05 Suncoast High School, Riviera Beach, FL: Dain Wetterstrand 6/05 Marion High School, Marion, ID: Nancy Balle 6/05

#### Winners of Summer Research Grants, 2005

Last summer, five students were awarded Summer Mathematics study grants. They were:

Jessica N. Lacy from Berkeley Prep in Tampa, FL. Jessica attended the Women's Technology Program at MIT. Information: http://wtp.mit.edu

Sarah R. Miles from Vero Beach High School in Vero Beach, FL. She attended The Physics of Magic and the Magic of Physics in the Michigan Math and Science Scholars Program at the University of Michigan. Information:

http://www.math.lsa.umich.edu/mmss/index.html Jimmy A. Chion from J.P. Taravella High School in Coral Springs, FL. Jimmy attended Stanford University Mathematics Camp (SUMaC) at Stanford University. Information: http://math.stanford.edu/sumac

Alex B. Kunin from Grissom High School in Huntsville, AL. Alex attended The Hampshire College Summer Studies in Mathematics at Hampshire College in Amherst, MA. Information:

#### http://www.hcssim.org

Andre J. Kuney from Clarstown Senior High School South in West Nvack, NY. Andre attended a class in Number Theory at Johns Hopkins University Center for Talented Youth at Franklin and Marshall College. Information: http://www.cty.jhu.edu

Do you have a talented student that we can add to our list? See our website for further information and application forms.

### FREE COMPETITIONS FOR YOUR STUDENTS

Register now for the Log 1 and Rocket City Math League contests. The Log 1 contest will be available online from our corporate partner, Maplesoft, and your students will use their Maple T.A. testing system. No tests to grade, no scores to log in. See details included with the newsletter! Details at the back of the newsletter. To register for the Log 1 Contest, just email Kay Weiss at matheta@ou.edu and let her know your school wants to compete. Provide the Chapter ID, name of the school, sponsor's name, email address, and the city and state where you are located. She will forward this information to Maplesoft and they will email instructions. To register for the Rocket City contest, logon to their registration website at: www.rocketcitymath.org. Details for both contests are also online at our website at www.mualphatheta.org > Contests

#### Award Applications due by February:

The Andree Award is presented to a student planning on becoming a mathematics teacher. The winning student receives a \$1000 cash prize and a free registration to the National Convention. Please remember deserving students that might qualify for this award. The Rubin Award is presented to the Mu Alpha Theta chapter which has a history of outstanding mathematics service to its community for at least two years. This service must promote interest in mathematics. Benefit from this project must be to a group other than its own chapter or its students. The winning chapter will receive a prize of \$500 and a distinguished plaque, to be presented at the National Convention, but a representative of the chapter need not be present to win. However, to encourage the chapter to attend, two free registrations and up to \$500 towards travel expenses to the convention will be provided.

#### FREE TI CALCULATORS WILL BE GIVEN AWAY!

Mu Alpha Theta has again purchased TI Calculators that it will give away to schools running math competitions, so they can be presented as prizes. These will be given away on a first come/first served basis. We have 75 TI 84 plus Silver and 75 TI 89 Titanium calculators. If you would like some to present as prizes, just email Kay Weiss at matheta@ou.edu. She will need to know the kind of competition you are running, about how many students you expect to compete, the age group competing, the date(s) of your competition, and which kind of calculators you would like. No group will be given more than six calculators. Our sincere thanks goes to Texas Instruments for selling these to us at such a reasonable price.

# STUDENTS

### New Mu Alpha Theta Student Award

National Mu Alpha Theta would like to create one or more awards to recognize members. Currently the student awards are: **Andree Mathematics Education Award** given to a graduating senior or a former Mu Alpha Theta member who has completed no more than two years of college work and who is interested in becoming a mathematics teacher; and **Kalin Award** given to a graduating senior who has exhibited unusual capabilities in mathematics and unusual service to Mu Alpha Theta.

Your suggestions are needed for the criteria and name for one or more new student awards. Some things to consider are as follows. Should the award be just for a senior? What should be the criteria for selection? Think about a member of your Mu Alpha Theta chapter whom you would like to see recognized. What are the qualities of that person in relationship to MAq? Please send your suggestions to Mary Emma Bunch, National MA $\Theta$  President at <u>mmbear@comcast.net</u> or to Kay Weiss, MA $\Theta$  Executive Director at <u>matheta@ou.edu</u>

#### **Students: Interested in Summer Math Enrichment?**

Mu Alpha Theta is offering up to \$2000 per student to help you pay for a summer math enrichment program, math camp, or to do math research with a professor or teacher. There is no deadline for applying. For details, see

http://www.mualphatheta.org/Scholarships/MAO\_Summer\_Grants.htm.

Read about the experiences of other Mu Alpha Theta students who won these grants in 2005 and see some of the programs available at colleges around the country. We would love to give you a grant next summer!

COMPETE FOR PRIZES! See information about this year's Log 1 Contest, The Rocket City Math League Competition, the Regional in Ohio, and our National Convention in Ft. Collings, CO online at www.mualphatheta.org

#### Maplesoft Contest in Hawaii

The Maplesoft Corporation again ran a contest at the Hawaii Convention this summer. Students took a 10 question, 20 minute general knowledge math test on Maple TA – Maplesoft's online computer algebra system testing system. Students tested at three levels: Mu, Alpha, or Theta. Mu students have taken through Calculus, Alpha students have taken through Precalculus and Trigonometry, and Theta students have taken math coursework through Algebra 2. Maplesoft awards the winners each a free registration at the 2006 National Convention in Ft. Collins, Co and a free student edition of Maple 10. Our continued thanks to Maplesoft for their support of Mu Alpha Theta and our students!

This year's winners are:

Marcello Delgado from Belen Jesuit High School in Miami, Fl; Gerardo Flores from Ladue Horton Watkins High School in St. Louis, MO; and Bradley Rubenstein from Stoneman Douglas in Parkland, FL.

#### **PUZZLE 4 U**

How sharp R U? What do the letters stand for next to the number of things in each line? How many can you get before peaking at the answers on the last page?

#### Do You Know Your Numbers?

1 W. on a U. 2 T.D. (and a P. in a P.T.) 3 D. in an A.C. 4 Q. in a G. 5 G.L. 6 W. of H. the E. 7 W. of the A.W. 8 N. in an O. 9 I. in a B.G. 10 I.T. 11 P. on a F.T. 13 C. in a S. 16 O. in a P. 32 D.F. at which W.F. 50 W. to L.Y.L. 57 H. V. 60 S. in a M. 88 P.K. 435 M. of the H. of R. 1000 M. in a K. 20000 L.U. the S. M.+M.+N.H.+V.+C.+R.I.=N.E. "1B. in the H.=2 in the B." 8D.-24H.=1W. 3P.=6 H.H.&M.H. at 12 = N. or M. 4J.+4Q.+4K. = A. the F.C. S. & M. & T. & W. & T. & F. & S. are D. of the W.

#### NEWS FROM THE GOVERNING COUNCIL

The Governing Council of Mu Alpha Theta is the organization's board of directors. The GC meets twice a year. At the summer meeting, just prior to the Hawaii Convention in Honolulu, the following issues were decided:

- Twelve Convention Grants for the 2006 Colorado Convention would be made available to chapters that had not attended a convention in at least three years. Applications are due by March 15 and forms can be found online. The grants pay for two registrations and up to \$500 in transportation costs.
- Due to the death of Mary Rhein, Governor of Region IV, Carol Botzner was appointed to fill the post until the end of the National Convention in 2006.
- 75 TI 84 plus Silver graphing calculators and 75 TI 89 Titanium graphing calculators will be purchased to give away to chapters as prizes in local competitions.
- Mu Alpha Theta will continue to award certificates and monetary awards at Regional and Foreign Science Fairs for outstanding math projects. This year two \$1000 prizes were awarded at the International Science Fair in Phoenix, AZ. in May. A number of international schools have started Mu Alpha Theta chapters after learning of the organization through the Science Fairs.
- Tom Clymer was again selected to serve a three year term as our representative to the CAMC board. Tom helps by giving input to the board which runs the American Mathematics Competitions AMC 10, AMC 12, AMIE, and Math Olympiad testing and team preparation. Mu Alpha Theta continues to support the Math Olympiad Team and awards prizes to the twelve finalists each year.
- Maplesoft was selected to run the Log 1 Contest for Mu Alpha Theta during the 2005-2006 school year.
- The grant to Grissom High School was renewed to offer the Rocket City Math League again. Extra money will be provided for increased mailing costs and software. Over 3000 students participated in the contest this past year.
- Changes will be made to the Kalin Award and the Diane Rubin Award. The winner of the Kalin Award will receive \$1500 instead of \$1000 in future years. The criteria were rewritten to award the Rubin Award for a service project promoting mathematics.
- The jobs necessary to run a National Convention will be shared by a Convention Planner and the Convention Hosts in 2008 and after. It was felt that someone who had run our conventions in the past could do much of the planning and relieve the hosts from this work. This would make it more attractive for schools to host a Convention in the future.
- The issue of granting a chapter to a home school or home school association was discussed at length. It was decided that we will continue to strictly follow our national constitution in granting charters to chapters.
- Honor cords sales were transferred to the Mu Alpha Theta Educational Foundation so that income arising from their sale can be used for grants, scholarships, prizes and support of national conventions.
- It was noted that during the 2004-2005 school year, Mu Alpha Theta awarded about \$12,000 in grants and prizes, provided over \$16,000 in support for participants and the running of our national conventions, donated \$10,000 to the Mu Alpha Theta Educational Foundation, donated \$1500 to the AMC and Math Olympiad Team, and transferred \$22,500 generated by honor cord sales to the Educational Foundation to support almost \$17,000 in grants, scholarships and prizes presented by the Foundation this past year.

#### Solutions:

1 wheel on a unicycle	
2 turtle doves (and a partridge in a pear tree)	
3 digits in an area code	
4 quarts in a gallon	
5 great lakes	
6 wives of Henry the Eighth	
7 wonder of the ancient world	
8 notes in an octave	
9 innings in a baseball game	
10 little Indian s	
11 people on a football team	
13 cards in a suit	

16 ounces in a pound
32 degrees Fahrenheit at which water freezes
50 ways to leave your lover
57 Heinz varieties
60 seconds in a minute
88 piano keys
435 members of the House of Representatives
1000 milliliters in a kiloliter
20000 leagues under the sea
Maine + Maryland + New Hampshire + Vermont + Connecticut +
Rhode Island = New England
1 bird in the hand = 2 in the bush

8 days – 24 hours = 1 week 3 pairs = 6 Hour hand + minute hand at 12 = noon or midnight 4 jacks + 4 queens + 4 kings = all the face cards Sunday + Monday + Tuesday + Wednesday + Thursday + Friday + Saturday are the days of the week