The

SCAM
Space Coast Area Mensa

Mensa

Volume 34, No. 10   **October, 2016**

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Editor's Notes

Dennis D. Logan, Editor

This job turns out to be much more difficult than I had imagined. Here it is the last day of the month. I've had most of the publication ready to go for a week but I'm missing committee reports and officer reports and it is really disappointing and depressing.

Presumably the mission of this publication is to highlight our members writing and report on the activities of our chapter.   Three members have been kind enough to submit interesting material con- tained herein. Spaces for activities have been allocated. Somebody needs to step up and fill in those blank pages.

There is no question our chapter is challenged by geography. Brevard County is long and narrow. There are effectively three or four distinct regions in our county. And we have limited, well-distributed membership.

The nature of Mensa also contributes to difficulty in building a vi- brant chapter. You don't go take the Mensa test because you want to help the homeless or due to overwhelming civic responsibility. I took the test because a guy I worked with was in Mensa, got lots of perks for it, and didn't seem all that smart. Apparently he wasn't because after I passed the test, management figured it was just another scam and stopped being impressed by it. Sorry Judd.

So, I'm back to where I've been. We never have done anything, at least not in ten years or more, we're not doing anything now, and we don't expect to do anything in the future.

I was in the Barnes and Noble store this month, and saw where a young girl had bought a Rubik's cube. That certainly brought back some memories about when I was having fun with that toy and it was so popular back when I was in college.

Invented in 1970 by the Hungarian professor Erno Rubik, I had read that by 2015 that over 350 million copies had been sold worldwide. The puzzle involves a cube divided into 27 smaller cubes each about 1/3 the size. Some people like to call them *cubies*. Each face of the cube is given a color. Rubik's idea was to devise a mechanism that allows each face of the cube to rotate. Repeated rotations mix up the colors of the cubes. The goal is to get the cubies back into their original positions, so that once again each face of the cube has the same color.

The cubie at the center cannot be seen, and is replaced by Rubik's mechanism. The cubies at the center of the faces spin but do not move to a new face, so their colors do not change. So we can work with the assumption that the six face cubies do not move, except for spinning. There are some excellent sites on the Internet that show 3-D pictures that move and rotate to demonstrate how this looks.

The cubies that can move are of two kinds: 8 corner cubies, at the corners, and 12 edge cubies at the middle of an edge of the cube. If you mix up the colors on these edges and corner cubies in all possible ways—for example, by removing all the colored stickers and replacing them in a different arrangement—the number of possible arrangements of the colors is: 519,024,039,293,878,272,000.

However, Rubik's cube does not allow this: all you can do is rotate faces of the cube. So the question arises: which of these arrangements can be obtained using a series of rotations? In principle it might be a tiny fraction of them, and mathematicians have proved that exactly 1/12 of the above arrangements can be achieved by a series of moves. They showed that the number of permissible arrangements of the colors on the Rubik cube is: 43,252,003,274,489,856,000. So, if 7 billion people on the planet could obtain one arrangement every second, it would take 200 years to run through them all.

I wondered back then how they may have calculated that number '1/2'? Well, it goes something like this: The 8 corner cubies can be arranged in 8 factorial or 8! (you remember, 1X2x3X…X8). This number appears because there are 8 choices for the first cubie, which can be combined with any of the 7 remaining choices of the second, which can be combined with any of the 6 remaining choices for the third, and so on. Each corner cubie can then be rotated independently into 3 different orientations. So there are (using the symbol '^' as exponent) 3^8 X 8! ways to arrange the corner cubies. Similarly, the 12 edge cubies can be ar-

ranged in 12! ways. Each can be placed in 2 orientations, so these can be chosen in 2^{12} ways. In all, there are $2^{12} \times 12!$ ways to arrange the edge cubies.

The number of possible ways to combine these arrangements is obtained by multiplying the two numbers together, giving $3^8! \times 2^{12} \times 11!$. That works out to: 519,024,039,293,878,272,000. Each rotation affects several cubies at a time, and certain features of the entire set of cubies can't change. These features are called invariant. In this case there are three:

Parity on cubies. Permutations come in two kinds, even and odd. An even permutation swaps the order of an even number of pairs of objects. If two even permutations are combined by performing them in turn, the resulting permutation is even. Now, each rotation of the Rubik cube is an even permutation of the cubies, therefore, any combination of rotations is also an even permutation. That condition halves the number of possible arrangements.

Parity on edge facets. Each rotation is an even permutation of the edge facets, so the same goes for a series of rotations. This condition again halves the number of possible arrangements.

Triality on corners. Number the 24 facets of the corners with integers 0, 1, 2 at every corner. Do this so that the numbers cycle clockwise in the order 0, 1, 2 at every corner. Do this so that numbers on two opposite faces are labelled 0. The sum of all these numbers, considered Modulo 3--- that is, considering only the remainder on division by 3-- is unchanged by any rotation of the cube. This condition divides the number of possible arrangements by 3.

Taking all three conditions into account, the number of possible arrangements has to be divided by $2 \times 2 \times 3 = 12$. That is, the number of arrangements that can be produced by a series or rotations is:
$3^8 \times 8! \times 2^{12} \times 11! / 12 = 43, 252, 003, 274, 489, 856,000$.
By the way, there is a term called 'God's Number' used with Rubik. If you define a move to be a twist of a single face through any number of right angles: The smallest number of moves that will solve the puzzle no matter what the starting position may be, is called God's number- probably because it seemed that the answer would be beyond the abilities of mere mortals to work out. In 2010, three mathematicians used the brute force of the computer to prove that God's Number is 20. The calculation ran simultaneously on a large number of computers, and would have lasted for 350 years using a single computer. That is really thinking outside the cube!

References: Erno Rubik, Tamas Varga, Gerszon Keri, Gyorgy Marx, and Tamas Vekerdy. *Rubik's Cubic Compendium*, Oxford University Press, Oxford 1987.
Ian Stewart. *Professor Stewart's Hoard of Mathematical Treasures*, Profile, London 2009.

The other day I was in my favorite fish store, Moons in Melbourne, when the clerk told me a story of what recently happened to him. A large, irate customer barged into the store loudly demanding a refund. He waved about a foam container that had in it the skin of smoked salmon.

This particular store sells smoked salmon (lox) from Peru. It is farmed Atlantic salmon that the store receives frozen in individual packages of whole salmon fillets of about two pounds each without the head or bones, sliced and separated from the skin, but with the skin. The store repackages it for retail sale by sawing the whole frozen fillet into roughly quarter-pound portions. The skin goes with the retail portions.

In other stores, smoked salmon is sold without the skin. This is particularly true with wild Sockeye salmon from the Pacific. The other salmon is considerably more expensive than the salmon that this store sells.

I have no idea of who the irate customer was or his background. Probably, in his background he was not familiar with eating skins and was objecting to paying for what he thought was an inedible item. Animal skins are a common food item in the U. S. Pork skins are sold in almost all 7-11 type stores. Fried chickens skins (gibnets) are a delicacy. And then there is salmon skin sushi.

I prepare the salmon skins that come with my orders of smoked salmon simply. I cut the skin into serving pieces heat some oil, I use olive, in a cast iron pan, and fry until crisp. Delicious. Other animal skins are also commonly eaten - sardines from a can, fresh sardines and other small fish, the skin of a roast Thanksgiving turkey, and the skin of a roast chicken.

Of course, I know nothing about this person's diet restrictions and preferences, but his response may be a result of the changes in American eating habits over the years.
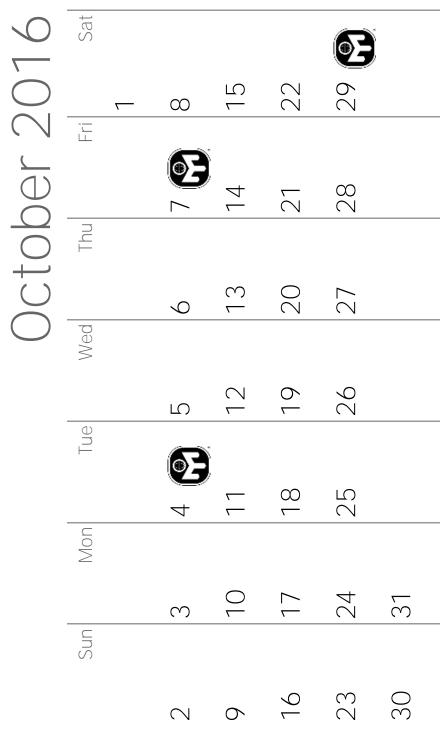
Certain edible portions of beef and pork that used to be available when meat was generally sold by butchers are now not usually available in supermarkets. Beef and veal are butchered in large installa-

tions. The sides are then divided into sales portions after the less desired items are removed for sale elsewhere. The prepackaged beef and veal, consisting of muscle meat goes on the supermarket shelves. The remainder, brains, kidneys, tongue, stomach, intestines, feet are sold elsewhere. Liver shows up in the freezer case off to the side. Brisket appears only around St. Patrick's day as corned beef.

Lamb is even more restricted, consisting of ground, chops, legs, and shanks. Mutton does not exist. Nor does goat and kid. Chickens are sold without the heads or feet. The heads go into pet food. The feet are sold in the Far Eastern market where they are a delicacy. I can recall my mother eating the feet of chickens from the soup pot when chickens were sold whole. That it really doesn't matter because of the forced growth gives us larger animals at an earlier age. To get more flavorful beef, veal, pork, chicken, and the parts not sold in the supermarket, one must resort to specialty stores at exorbitant prices, and even those are restricted in their sources. I have yet to find veal sweetbreads even in the specialty stores. Animal skins are another matter. Beef, veal, pork, and pig skins are valuable in the leather market and are sold there. Fish skins, except for the aforementioned, have little value except as pet food.

I am not surprised that that particular customer was irate to find salmon skin in his order of smoked salmon.

Our Regular Events:

- **C.A.B.A.G.E.:** Food Court at the Merritt Square Mall. Every Monday at 6pm. *Host: Karen Freiberg, 633-1636.*
- **GO!:** Books-A-Million, The Avenue, Viera. Every Saturday at 1pm. Hosted by the Space Coast Area GO Association. Contact George Lebovitz for more info: rokkitsci@att.net .

October 2016

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

7th - Friday   5:30 PM   **FIRST FRIDAY AT HOOTERS SIG**

Big plans for this month's meeting! I don't want to reveal them now because someone may try to circumvent them but they are HUGE! I'm going to get my hair Trumped to start. Call Dennis 321 501 7547.

4th - Tuesday 6:00 PM   **EXCOMM MEETING**

This is our monthly business meeting. See minutes for location.

29th - Saturday   5:45 PM   **S.N.O.R.T.**

Join us for some Japanese cuisine at The SCAM's best attended event at our new venue, **Hioki's,** 3200 NE Dixie Hwy. (US 1) in Palm Bay. It is about 2 miles south of US 192. **Contact:** *George, 474-4075 for details.*

Calendar Updates   **ATTENTION SCAM MEMBERS!**

Every effort is made to bring to you an accurate up-to-date Calendar of Events. However, last minute changes can and do occur past newsletter deadline. For up-to-date info, visit ***spacecoast.us.mensa.org*** and click on "Calendar".

#82
Michael worked for centuries
Some stars helped him to see
The desolation far ahead
So he wrote quatraineously

#83
Some party crashers came to town
And said they were officials
But all I ever knew them by
Were simply their initials
They didn't like my family ties
My rhetoric or my cache
They really got me fired up
And ruined my daily bash

#84
Some think I have a cousin
In the Windy City
But what I've done across the land
They all think is a pity
He gives folks a belly laugh
Bantering with Peg
My relationship requirement
Is just to make them beg

#85
He's in Oakland County
Or way out East they swear
He's pushing up some daisies
But they really don't know where

#86
They had the world's attention
They were putting on a show
Smarting from an altercation
A few short years ago

It was billed the race of races
The contenders brought their best
Our man whipped them soundly
He was equal to the test
They stomped and scowled and hung their heads
They couldn't take defeat
We knew it wouldn't be too long
For history to repeat

Answers:
#82 Michael de Notre Dame-Nostradamus ("Centuries" was his book—stars=he believed in astrology)
#83 David Koresh
#84 Ted Bundy
#85 Jimmy Hoffa
#86 Jesse Owens

OCTOBER BIRTHDAY GREETINGS

I didn't get the list from HQ so I'm sorry if you were hoping you see your name here and it isn't. Also I don't know about new members or anything else. Falling apart here!

The "Fine Print" for Calendar Events:

Membership in American Mensa, Ltd. makes you eligible to attend SCAM social functions. Escorted and invited guests of a member or host are welcome. Adult family members of Mensans are encouraged to participate in SCAM activities, as are well behaved children. However, attendance at any social function in a **private home** is subject to the hospitality of the host. Compliance with published house rules is required, and "Kitty" payment is **not optional.** As a courtesy, notify the host if you plan to attend. Announced hosts should attend their events or arrange for a stand-in if unable. When reservations **are** required, you may not be able to participate if you fail to call.
*S-S*moking*; NS- N*o *Smoking; SS-S*eparate *S*moking Area*; P-P*ets in the home*; NP-N*o *P*ets present*; BYO_-B*ring *Y*our *O*wn: *_S*nacks, *_D*rinks, *_E*verything.

The ExComm met at the home of Karen Freiberg at 876 Buxmont Ct., Rock-ledge, FL 32955, on Tuesday, September 6th 2016, called to order by LocSec Joe Janson at 6:07 pm.

<u>Members Present:</u> Joe Janson, Karen Freiberg, Val Valek, and George Lebovitz.

<u>Guests</u>: none.

<u>Officer/Committee Reports (details may be found in the footnotes):</u>

    Treasurer's report: Not available at the time of the meeting.
    Testing: Testing coordinator, Hank Rhodes, reported August testing via email.

The minutes of the August, 2016 meeting as published in the SCAM were approved.

The proposed new bylaws are still awaiting final review.

The next meeting was set for Tuesday, October 4th 2016 at 6:00 pm in the home of Karen Freiberg at 876 Buxmont Ct., Rockledge, FL 32955.

The meeting was adjourned at 6:23 pm.

September Testing Report:

Contacted 3 candidates for the first time
Contacted 10 candidates for the second or third time;
Tested none.
Next test session is October 15th, 2016 at the Central Brevard Library in Cocoa.
Prospective candidates should contact us at <u>mensatest@cfl.rr.com</u>

SCAM

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