

NEWSLETTER

August 18th, 2006

Today's reminders

- Remember to wear sun block, sun glasses and a hat or a paliacate. Bug repellent is also a good idea.
- Be ready for the parties at night!!!

Today's schedule:

6:30—7:30

Breakfast

7:40—8:00

Bus Boarding at FA, HI, HY

8:00—9:45

Transportation to Chichen-Itzá

9:45—10:15

IOI Group Picture

10:15—10:30

Groups forming

10:30—12:30

Chichen-Itzá Tour

12:30—12:45

Bus Boarding

12:45—14:30

Transport to Hotels

14:30—16:00

Lunch at Hotel Restaurants

16:00—20:00

Free Time / Tournaments Finals / GA Meeting (schedule change from 18:00)

20:00—20:30

Bus Boarding and Transportation for Rey Pakal

20:30—23:00

Mexican Party / Dinner at Rey Pakal

23:30—24:00

Bus Boarding and transportation.

Competition is Over, Let's continue with the party!!!

After yesterday there will be no more stressing exams, so it is time to party and celebrate! As we say in Mexico "let's celebrate the victory or drawn the failure, but either way lets party". Some of you already started yesterday night!

Today we are going to Chichen Itzá, a beautiful mayan place, in the middle of the jungle, were you can visit pyramids, temples and zenotes. Buses will be departing at 8am sharp. You can start boarding by 7:40am. We will be getting back by 2:30pm.

We will also have a farewell Mexican Party for the contestants (which will be held at the Holiday Inn Hotel restaurant "La Arboleda") and the famous Uzo Party for leaders and guests at restaurant "Rey Pakal" (buses will be departing at 8pm and coming back at midnight – don't forget the Uzo tradition).

At the beach some of you got really bad sunburns. For Chichen Itzá, please do not



forget your sun block, sun glasses, a cap, sombrero or paliacate, and comfortable clothing and shoes since we are going to be walking a lot. Since Chichen is almost in the middle of the jungle you may also want to bring with you some bug repellent.

The site is really worth seeing, people from all over the world keep coming to see this place that gets us back to the Mayan era, so at the end, all your pains for waking up early will be worth it.

Interviews at the end of the 2nd. Day of competition

We interviewed several of you after the competition, and most of you agreed that the second examination was a lot harder than the first one, which was good, because the first examination helped every body gain confidence and some points, and the second examination helped differentiate among the

strongest competitors.

Results are not official yet but some of you might hear notices from a coming medal soon.

Over all, leaders of all countries are happy with the technical level of the exams, and the development of the contest.

The importance of a different point of view

On Wednesday, when we were all at the beach I saw some of you positively amused with a coconut. It struck to me that coconuts are so common to me I don't even notice them anymore!

There are many examples where someone coming from outside discovers something that was there for a long time but nobody noticed it any more.

This is the case of the rediscovery of Chichen Itzá and the Mayan culture.

When the Spaniards came to Mexico, they burnt almost all of the Mayan documents, destroyed temples and forbade the Mayan people to go back into their old religion.

The Mayan culture was slowly forgotten and eventually disappeared from many people's minds.

It was right on the 19th century that two European explorers, helped to rediscover the Mayan culture by traveling around in the jungle, asking natives and going through wild jungles.

The important thing was that all natives and people from the region thought it was "normal" to see some hills around a very flat territory and maybe even constructions. It never stroke anyone's attention until these two explorers came into our continent.

So thank you guys for helping me rediscover the coconuts. *Ana Paola.*



Prehispanic Food and Tequila



Even though they didn't look yummy or very appealing, still there were some very brave people who came along and tried this exotic food (some others really did not find the nerve to taste it).

Someone told us that this is one of the things he likes most about the IOI: every time he goes to a country, he tastes new food, like

snake in China and dog in Korea. He was very happy to eat insects in Mexico and he found them delicious.

Some people said the ant larva tasted like rice, some that they didn't have much flavor. Most people thought that the crickets were spicy, and some asked if you should eat the legs or cut them (of the crickets). Finally, some said that the agave worms were tasty and others said they were disgusting, but still the plates ran out of food in seconds.



Just as you accompany a good meat cut with a French wine, Agave worms should be accompanied with Tequila or Mezcal. And everybody liked Tequila shots. Many of you were drinking Tequila with lime and salt like if you were born to it. Big Tequila bottles were gone in minutes.

Mezcal is stronger and tougher than Tequila. Some liked it too, some found too strong. Some said it burnt their throat.



Overall, to our happiness and joy, prehispanic food was a total success, even if it was just to win a bet, prove your mind control or show someone that you're not a chicken.

Issue 6, Friday, August 18th

NEWSLETTER

Special Tournaments were a total hit!



If you went to the Game Room yesterday between 5 pm and 9 pm, you know what I mean! You couldn't even hardly breath in the room because it was so crowded.

You would see baleros jumping everywhere, flying Ping Pong balls, competitors programming their robot sin their laptops and Futbolito passionate games.



About Chichen-Itzá

Chichen Itzá means "the place where the Itzaez's well is". The mayan people where divided in different tribes who ruled different city-states (like the ancient Greeks) and the ones who inhabited this place were the itzaes.

After several centuries a group from the middle part of Mexico, the toltecas, came and influenced the Mayans in their beliefs and architecture.

This influence helped the people of Chichen Itzá to improve their way of life, making it the most powerful city in the Mayan regions.

However, within the years another great capital raised

on the mayan territories, the new city of Mayapan emerged (some years before the mayan civilization collapsed).

At first, the relationships between Mayapan and Chichen Itzá were good at first. It is told on the ancient mayan books that their relationships ended when the king and lord of Chichen Itzá stole the mayapan's king's bride. After that, it all ended up with the fall and abandonment of Chichen Itzá just as the city of Mayapan flourished at the last era of the Mayan civilization.

Today's birthdays (Aug, 18th)

"Las Mañanitas" for:

- Tasmin Imran Sunny, Bangladesh

Alternative thinking in the IOI. Joining Points.

There was one problem in the exam yesterday, that was solved 100% only by one of the competitors. This problem was originally proposed by someone who has never seen an IOI problem before and as such, was able to propose a very original problem, that has a very elegant solution, but not the common one for IOIs. The solution does not need a lot of knowledge or work for the implementation, it requires creativity and alternative thinking, just like the rediscover of Chichen Itzá.

Here is a summary of the problem (problem number 2) and a brief explanation on its solution:

Problem. “Joining points” is a single-player game. To play it, choose two integers greater than two and call them g and r . Then draw four points at the vertices of a square making the top two points green and the bottom two points red. Draw green points and red points inside the square taking care that no three points, including the four initial ones, are in the same line. Continue until the total number of green points equals g and the total number of red points equals r .

After the board is drawn, start joining points. Any two points can be joined by a line segment as long as:

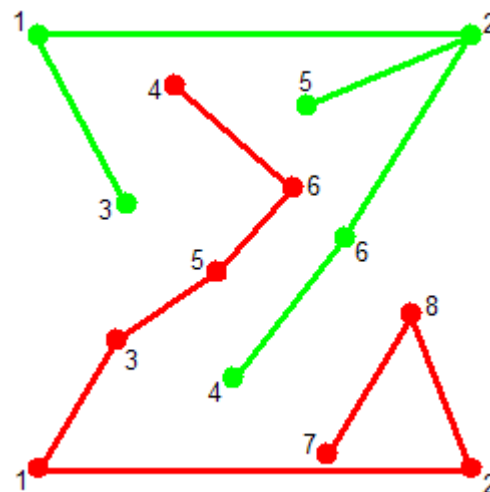
- The two points to be joined are of the same color, and
- The line segment joining the points does not intersect any other previously drawn line segment (other than at the endpoints).

Two points u and v are said to be in

the same *component* if it is possible to traverse from point u to point v using the line segments already drawn.

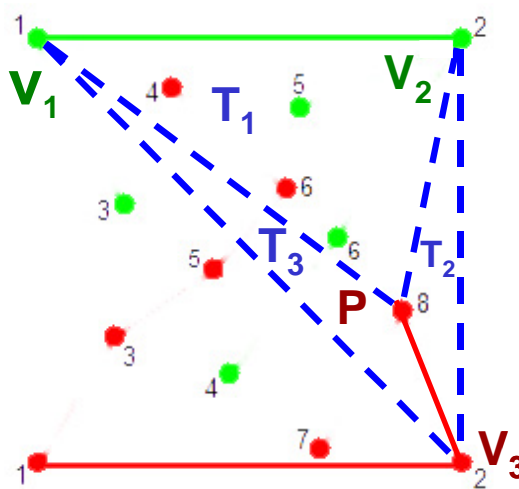
You win the game if you get all the green points in one component using exactly $g-1$ line segments, and all the red points in another component using exactly $r-1$ line segments. **It can be proven that if the points are drawn as described above, then there is always a way to win the game.**

The figure shows a sample game all the green points are joined into one component and all the red points are joined into another component.



Solution.

- You must reach a configuration where you have a triangle with 3 points, two of which are color c_1 , call them V_1, V_2 , and one which is color c_2 , call it V_3 .
- You receive the c_1 colored points already connected.
- Now look for the color of the points inside the triangle formed by your original 3 points. If they are all c_1 , join them all to one of the c_1 points, may be V_1 or V_2 (but only to one of them) and you are done.
- If you have a combination of c_1 and c_2 colored points, join the V_3 vertex with another c_2 color point inside the triangle, call it P .
- This will define three new subtriangles $V_1V_2P, V_1V_3P, V_2V_3P$ that have the same property as the original triangle but fewer points inside.
- You can continue by divide and conquer technique until you finish.
- To improve efficiency you should select from all the interior c_2 points one in median position.
- To get the initial configuration, just join the green points and the red points together in the initial square. Divide the square by one of its diagonals and you will get two triangles that satisfy the invariant of the recursion.



IOI Souvenir Sale!!!

Come get your IOI Souvenir before they are gone! Remember we have T-Shirts (only \$9 USD, two for \$15 USD—save \$3, three for \$21 USD — save \$6 USD, four for \$27 USD — get the fourth for free!), Long Sleeve T-Shirts, Polo Shirts. Back packs are on sale, 25%, from \$20 USD to \$15 USD. IOI Paliacates are 50% discount, from \$5 USD to \$2.5 USD. Share your memories from this event back home with your loved ones!

