Left to right Waritha Chiarnpattanom, Ray Fong, Seung SooYoon, Apitchaya Chiarnpattanom.

Students Win Top Awards in the *UKMT Math Challenges*

RIS High School Math Club has been organizing and administrating several math competitions this year, one of which is the UKMT.

The United Kingdom Mathematics Trust (UKMT) was founded in 1996 as a registered charity to advance the education of children and young people in mathematics. The UKMT organizes national mathematics competitions and other mathematical enrichment activities for 11-18 year old UK school pupils. These range from popular "mass" Maths Challenges to team competitions, forums for teachers and the selection and training of the UK team for the International Mathematical Olympiad (IMO).

Through the Maths Challenges and team competitions, they aim to stimulate greater interest in mathematics across the 11-18 age group, encouraging participation and rewarding enthusiasm and achievement. Last year over 600,000 pupils from 4,500 schools took part in the three Challenges, the UK's biggest national math competitions.

The top scoring 40 percent of the entrants receive bronze, silver or gold certificates based on their mark in the paper.

- The Gold award is achieved by the top 6 percent of the entrants
- The Silver award is achieved by 13 percent of the entrants
- The Bronze award is achieved by 21 percent of the entrants

The Intermediate Mathematical Challenge (IMC) is a trickier level for those who have completed the Junior Math Challenge.

Intermediate Mathematical Olympiad

This is often abbreviated to the IMOK (Intermediate Mathematical Olympiad and Kangaroo).

The IMOK consists of three papers, 'Cayley', 'Maclaurin' and 'Hamilton' named after famous mathematicians. The paper the student will undertake depends on the year group that student is in. Each paper contains six questions. Each solution is marked out of 10 on a 0+ and 10- scale; that is to say, if an answer is judged incomplete or

unfinished, it is awarded a few marks for progress and relevant observations, whereas if it is presented as complete and correct, marks are deducted for faults, poor reasoning, or unproven assumptions. As a result, it is quite uncommon for an answer to score a middling mark (e.g. 4–6). This makes the maximum mark out of 60. Students getting two questions fully correct are considered "very good." All people partaking in this challenge will get a certificate; one of Participation, Merit and Distinction. The mark boundaries for these certificates change every year, but normally around 30 marks will gain a Distinction. Those scoring highly (the top 50) will gain a book prize; again, these changes every year, with 44 marks required in the Maclaurin paper in 2007.

Here are our top students. All of them are Gold certificate winners of Intermediate Math challenge (IMC) Year 2007-8.

Seung SooYoon	Best in school, Gold in IMC. Cetificate of distinction (top 25%), Silver Medal (Top 100), Book Prize (Top 50 in the world) in follow on round Hamilton (IMOK Olympiad)
Waritha Chiarnpattanodom	Gold in IMC and certificate of participation (Top 50%) in Hamilton IMOK
Patanin Kowittayawong	Gold in IMC and Pink Kangaroo qualifier
Tarika Thienapirak (Pin)	Gold in IMC and Pink Kangaroo qualifier
Ramestr Sasirajpornchai	Gold in IMC and Pink Kangaroo qualifier
Peeranut Khongthavornpipat	Gold in IMC and Pink Kangaroo qualifier
Nithin Kumar	Gold in IMC and Pink Kangaroo qualifier
Arnant Chaovanayotin (Ant)	Gold in IMC and Pink Kangaroo qualifier
Pailin Chiaranunt	Gold in IMC and Pink Kangaroo qualifier
Tipwatoo Aramwittaya	Gold in IMC and Pink Kangaroo qualifier
Abhinav Chauhan	Gold in IMC and Pink Kangaroo qualifier
Pawit Chayanupatkul	Gold in IMC and Pink Kangaroo qualifier
Wadhana Jetjirawat (View)	Gold in IMC and Pink Kangaroo qualifier

UKMT SENIOR MATH CONTEST (Nov.8, 2007)
Gold Certificate Winners

Ray Fong Wei **Best in school**

F.S. Muhibul Karim Apitchaya Chiarnpattanom, Krichaphon Dejtirayakorn
Da-hyun Kim, Hyung Sub Lim, Apiwat Wangweerawong
Mathanun Suthiseranee

Want to try a few questions?

These are from the middle range (Intermediate competition) and there are 25 questions in one hour.

Easy . Which is the largest prime number that will divide exactly into 2+3+5x7?

A 2 B 3 C 5 D 7 E 11

Medium. Sam is holding two lengths of rope by their midpoints. Pat chooses two of the loose ends at random and ties then together. What is the probability that Sam is let holding one untied rope and one loop?

A 1/2 B 1/3 C 1/4 D 1/5 E 1/6

Hard. A garden is the shape of a right angled triangle with sides 30, 40 and 50 meters. A fence goes fro the corner of the right angle to a point on the opposite sides so that it divides the garden into 2 sections that have the same perimeter. What is the length of the fence?

A 25 B $8\sqrt{3}$ C $5\sqrt{11}$ D $5\sqrt{39}$ E $12\sqrt{5}$

Answers on PAGE 38