

TANGENTS

VOLUME 1

∞

ISSUE 2

∞

MAY-AUGUST 2014



INSIDE THIS ISSUE

| | |
|--------------------------------|---|
| KMC 2014 Winners Announced | 1 |
| News: Malaysia at IMO 2014 | 1 |
| Upcoming Events | 2 |
| Beaver Informatics Competition | 2 |
| KMC Organizing Committee | 2 |
| Problems from KMC 2014 | 3 |
| Featured Grand Prix Winner | 3 |
| From the Editor | 4 |
| KMC FB Fanpage | 4 |

∞

TANGENTS is the official publication of Kangaroo Math Competition Malaysia. It is published three times a year and distributed free of charge.

FOUNDER & EDITOR-IN-CHIEF
M. Suhaimi Ramly

CONTRIBUTOR
M. Aqil Kamarudin

PUBLISHED BY
KMC Malaysia Secretariat
c/o Ardent Educational Consultants Sdn. Bhd.
No. 100-1, Jalan 2/23A,
Taman Danau Kota,
53300 Setapak, KL.
Phone: 03 41317672
Fax: 03 41490572

PRINTED BY
e-print Solutions Sdn. Bhd.
No.3 Lorong Brunei Tiga
Off Jalan Pudu
55100 Kuala Lumpur.

KMC 2014 WINNERS ANNOUNCED

The KMC 2014 winners have been announced at the official KMC website.

A total of 19,606 participants, representing more than 500 schools, took part in KMC 2014.

Of these, the top 10% will receive medals (317 will receive the gold medal, followed by 639 silver and 1002 bronze medallists). The next 40% will receive

the Honourable Mention. Top scorers in each category will receive the Grand Prix.

All certificates will be mailed to all participating schools starting from the end of July. The medallists will receive invitations through their schools to attend the KMC award ceremony (see page 2).

The award ceremonies

will be held at five venues, held in different states from the events last year. This is to ensure that the KMC remains a truly national event.

The first award ceremony for East Malaysia will be held in Kuching this August. There is a plan to have an award ceremony in Sabah next year.

∞

News: Malaysian team excelled at IMO 2014

The KMC Secretariat would like to congratulate the Malaysian contingent to the 55th International Mathematical Olympiad (IMO) that took place from 3 to 13 July 2014 in Cape Town, South Africa.

The Malaysian team won 2 gold, 1 silver and 1 bronze medals, placing 12th in the world based on medal tally. This is the best performance of Malaysia in IMO history.

Anzo Teh Zhao Yang and Justin Lim Kai Ze won their gold medals at their fourth attempt at the IMO.

Khong Yi Kye attained a silver medal, his second at the IMO. He won the KMC 2013 Grand Prix in the Student category.



The Malaysian IMO team: (from left) Anzo, Kin Aun, Shazryl, Justin, Zi Song & Yi Kye. Credit: The Star

12-years old Yeoh Zi Song of SMJK Chung Ling Penang created history by becoming one of the youngest medallists in the IMO. Shazryl Shafyz b. Zulrushdi and Tan Kin Aun rounded up the

excellent results by obtaining the Honorable Mention award.

The IMO is the annual world championship of mathematics for students of high school age.

The delegation was led by Mr. M. Suhaimi Ramly, the director of KMC, and Mr. Irwan Iqbal Ihsanuddin of Pusat PERMATApintar Negara, UKM.

For more details, visit www.imo2014.org.za.

∞

KMC 2014 GRAND PRIX WINNERS

PRE ECOLIER
JASMINE KAURECOLIER
CHAN YI FENG
ONG JING JIE
TAM LI ZHANGBENJAMIN
CHONG REN HAO
LIM CHUEN TEK
STUART HENG FU YU
TAN LI XUANCADET
ANG JIAN HWEE
TAN YIN XIANGJUNIOR
ONG WEI SERN
SEAN GEE ZHING
TEH KAI ZHISTUDENT
GOH WEI TI

KMC 2014 GOLD MEDALLISTS

PRE ECOLIER
CHAN YUE WEN
CHANG KAI RONG
GAN YONG MIN
GIAM KEE HUNG
HAREESHA KAUR
KOH JUN YUAN
MUHAMMAD AFIF FIKRIY BIN MOHAMMAD ADLI
NG JING XUN
NGO EE JUN
NILAVARASEN A/L SUBRAMANIAM
RAUDHAH IZZAH BINTI MOHD AZHAR
WAN NADHRAH BATRISYIA BINTI MIOR AZMI
YAALINI A/P MANIMARAN
ZACHARY SIM VAY KEAN

ECOLIER
CARINA ANNE GNANOU
CHANG ZEE HANG
CHEAH KAH HOE
GAGANRAJ SINGH
GOH JIE YI
HAR TIEN YU
IMELDA LEE JING EN
IVAN KIM TYN YEE
KOH CHIA WEE
LOH LE WEN
NG QI HAN
NUR AUNI NAZZURA BINTI MOHD NAZRI
NUR FATIHAH BINTI MOHD HANIFF
SAMIR HUSSAIN KHAN
SHAZANA BINTE MOHD SHAJAHAN
SYAFIANES IRIESYA BT. ZULKIFLEE
TAN JAY TZE
TAN MIN HENG
TAN ZHEN YI
TERRANCE CHIA LI YANG
TEY ROU XIAN, ROXANE
THEODORA LAU XIN YU
WENDY KONG XIAO QI
WILLIAM TEH KAI YUAN
WON XIU ZHEN

BENJAMIN
ABDUL RAZAK KHAN B RUSTUM ALI KHAN
BENJAMIN LOH ZE MIN
CARMEN LEONG KAY WEN
CHEAH AI CHI
CHENG KAH KAI
CHERYL CHOW SHU WEI
CHEW HONG JIN
CHOOI KAE LEANG, VERON
CHUA MAO JUN
GABE ROBERTS
HO CHUN WAI
JOEL TANG EN ZHE
KOH ZHAO XIANG
LAI FU JUN
LEE HSIEN YONG
LIM LI XIANG
LIM ZHEN YANG
LINUS THEO DENGGAH
LOH TZE SIANG
LOK YI XIN
LOW WEI SHENG
NG JIA QUAN
ONG JING KAI
OWEN WOO TSEN WEN
PANG XIN YING
(continues on next page)

Upcoming events in the KMC Calendar

1) KMC 2014 Award Ceremony

Five award ceremonies for KMC 2014 medallists will be held throughout the month of August:

4 August: Kota Bharu, Kelantan

6 August: Sungai Petani, Kedah

14 August: Melaka

20 August: Putrajaya

28 August: Kuching, Sarawak.

The exact venues will be announced in the invitation letter to the schools, and on the KMC FB page.

2) Networking Event

The KMC team will go on a nationwide tour in the months of September and October to network with teachers.

All teachers are welcome to attend this event. There will be free training workshop for math competitions, given by experienced trainers. Venues TBD.

Tentative schedule:
27 September: Kedah
4 October: KL
11 October: Johor.

3) Kangaroo Math Camp & Summit

KMC team will organize a 3 day Math Summer camp for students. Tentative schedule: 1 to 3 December in KL (venue TBD).

WE WOULD LIKE TO WISH SELAMAT HARI RAYA AIDILFITRI TO ALL OUR MUSLIM READERS



Beaver Informatics Competition (BIC)

The KMC secretariat will introduce our new competition in early 2015: the *Beaver Informatics Competition* (BIC). The BIC is the first contest in Malaysia to test students on computational thinking and problem solving. Details will be posted on our website and Facebook page in due time.

The BIC is the local edition of the *Bebras International Contest on Informatics and Computer Fluency* (bebras.org), which was

founded in 2004 by Prof. Valentina Dagienė of Vilnius University, Lithuania. Since then, the Bebras movement has reached more than 30 countries, with Malaysia being the latest entrant among the Bebras countries.



KMC 2014 Organizing Committee

Director

M. Suhaimi Ramly

Deputy Director

M. Iznan Shamsuddin

Team Members

M. Izhan Noorzi (Contest Manager)

Ahmad Nubli Muhammad Barrawsdinata A. Hamid

How Si Wei

How Si Yu

Jonathan Ramachandran

Lim Kah Yong

M. Aqil Kamarudin

M. Hazwan M. Adzemi

Norhayuni Zolkepli

Nurul Hidayu Zainal

Shamsul Afzan Mat Salleh

If a man's wit be wandering, let him study mathematics.

Francis Bacon

Mathematics is the music of reason.

J. J. Sylvester

There is no royal road to geometry.

Euclid

Selected Problems from KMC 2014

Here we present a selection of our favourite problems from KMC 2014:

(Pre Ecolier #14) How many numbers are greater than 10 and less than or equal to 31 which can be written using digits 1, 2 or 3 only? You can repeat digits.

(Ecolier #12) Rabbit Borya likes cabbages and carrots very much. In a day he eats either 9 carrots, or 2 cabbages, or 1 cabbage and 4 carrots. During one week Borya has eaten 30 carrots. How many cabbages has he eaten during this week?

(Benjamin #13) A whole number has three digits. When we multiply the

digits we get 135. What result do we get if we add the digits?

(Cadet #17) Six boys share a flat with two bathrooms which they use every morning beginning at 7:00 o'clock. There is never more than one person in either bathroom at any one time. They spend 8, 10, 12, 17 and 22 minutes at a stretch in the bathroom respectively. What is the earliest time they can finish using the bathrooms?

(Junior #23) On an island, frogs are always either green or blue. The number of blue frogs increased by 60% while the number of green frogs decreased by 60%. It turns out that the

new ratio of blue frogs to green frogs is the same as the previous ratio in the opposite order (green frogs to blue frogs). By what percentage did the overall number of frogs change?

(Student #23) The equalities, $(2014 + m)^{1/n} = 1024^{1/n} + 1 = k$, are given for positive integers k, m, n . How many values can the number m take?

Good luck!

Answers on page 4

∞

**OUR DEEPEST
CONDOLENCES TO THE
FAMILY MEMBERS OF
THE VICTIMS OF
MH370 & MH17**

Featured Grand Prix Winner: Sean Gee

Sean Gee Zhing, hailing from SMJK Yok Bin, Melaka, is one of the Grand Prix winners of KMC 2014. He attained the perfect score in the Junior category.



Pictured: Sean Gee (right), at the ICAS award ceremony

He has been a constant fixture in the regional math competition scene, as he has bagged two perfect scores in the Malaysian Computing Competition 2013 and the International Competitions and Assessments for Schools (ICAS) 2013 in the subject of Mathematics, as well as being the first place winner in the Singapore and Asian Schools Math Olympiad 2014.

His interest in mathematics stemmed when he was young. However, his involvement in math contests only happened by chance.

In Standard 5, he was selected to go for a mathematics camp. He said, "After a few selection processes, I managed to

emerge as one of the top performers. The rest is history".

Even with such an impressive string of achievements, he has higher goals still.

His current goal is to represent Malaysia in the prestigious International Mathematical Olympiad (IMO), which will be held in Chiang Mai, Thailand, next year.

Besides mathematics, he also enjoys travelling, doing origami and reading a good book.

∞

KMC 2014 GOLD MEDALLISTS

BENJAMIN

PEONG WEI JUN
SAMUEL KOH QI EN
SHAWN JIN YUAN XIAO
TAM WAI YEE RACHEL
TAN CHERN LIN, JUSTIN
TAN JUN RONG
TAN SHAO XUAN JORDAN
TATE OPPENHEIM
TEH ZHI REN
TEOH GENG SHENG
VICTOR THAM CHIE WENG
WONG WEI DE
YEE YUNG SHUEN BRANDON
YEW JUN YI
ZACH YEE HSIANG ZHI

CADET

ASAKA MORI
BEH MING PHING
BRENDAN CHOO JIAN SHEN
CHAN JIA ZHENG
CHEE WEN ZHAN
CHEOK KAI XIN
DESMOND GIAM
EMILIE WONG SING YEE
GOH YONG XUAN
HOR YE HENG
JENNESE MOO WANN WAI
JOASH WANG KAI HENG
JOHNESSEN SOO ZHIN THAO
JONATHAN AIDAN ROYAN
KHOO JUN QIAN
KOK HUI TAOU
KOW HONG ZHANG
LAI WEN CHENG
LEE JIA JUN
LEE JIA ZHE
LIM HAN SHENG
LIM HUAN-RAN ISABEL
LIM JING YI
LOH GUO JUN
LOUIS GOLDSMID
MOHAMED ALIFF TAFF BIN MOHAMED HALIM
MUHAMMAD AIMAN BIN AZLAN
MUHAMMAD NAZRIN B. AMINUDDIN
NORMAN WONG KEE WEI
ONG KHAI SERN
ONG XIN JIONG
OOI ZE YAO
PHILIP LEE
POH YI YANG
SAMSON LAI CHENG YI
SIM YEE SHUANG
SOH HUI YU
SYED ZIAD BIN ZULKARNAIN AL JUNID
TAKEDA SHIGENORI
TAN JIA QING
TAN PENG YING
TAN XI ZHE
TAN YI NING
TEH MING MIN
TEY HE YANG, RYAN
TIAN OOI
TUNG CHUN XIAN
WONG JUN RONG
WONG KUAN HUA
ZACHARY LIEW ZHE-XI

JUNIOR

ATHAN SIAH ZEN HANN
CHAN XIAN YANG
CHIA TZE TENG
CHIENG HERNG EE
CHIEW WAN KAI
CHONG JING QUAN
CHOW KEN KENT
CHUA KUAN YANG
COSMARTIN ALLSTAIR ANAK COSMAS BUIJING
DORCAS CHUA CHIA ERN
DURRANI AFIQ BIN SAIDIN
ENG WEE LIM
FOO SHI QUAN
FOO YANG
GABRIEL SENG QI WEN
GOH WEI JIAN
HII CHEE YANG
HO JONG YI
HOI LEE YANG
IGNATIUS ONG SING YEE
IVAN CHAN KAI CHIN
JEREMY KOU KHAI JIE
JOANNA TAN ERN ERN
KAN MAN KIT
KOW PU ERN
LAM YIN HAU
LAW HONG CHENG
(continues on next page)

KMC 2014 GOLD MEDALLISTS

JUNIOR

LEE CHIN NAN
 LEE DAI WEI
 LEE HAO TIAN
 LEE MAO CHANG
 LEE REN GHEE
 LEE ZHI WEI
 LIM QIN YONG
 LIM ZI HENG
 LOW KHAI JER
 LYE YU XUAN
 MARCUS LOO ZEN-EU
 MOHAMAD AMIR AIMIRUL BIN TAIM
 MOK SIAO CHI
 MUHAMMAD AFIF BIN MOHD ANIS
 MUHAMMAD AMIRUL BIN. MOHD AZLEY
 MUHAMMAD HARIS AFIQ BIN RAFINGEI
 MUHAMMAD IRFAN HIZAMI BIN ZAINAL
 ADNAN
 NAOMI LEE YING SONG
 NG KAH YEE
 NG KEN KIT
 NG MIN SHEN
 NG MIN XIAN
 NIK MOHAMMAD KHALID BIN NIK AHMAD
 SAIDE
 NIK MUHAMMAD AZLAN BIN NIK ZURAIK
 NIRANJNA A/P SWAMINATHAN
 PEONG WEI ZHEN
 RHYNEE LEE EN QI
 SAI YIN CHEN
 SATHYANARAYANAN RAAMAMURTHY
 SHAUQI BIN MAZLAN
 SIA WEN YEE
 SOH YIT HAN
 TAN BING CHIEH
 TAN ENG HAO, LOUIS
 TAN JUN HUI
 TAN KAI YI
 TAN SOON WEI
 TAN XUN
 TAN ZI CHEN
 TEO JIEN TIEN
 THAM WAI QIAN
 TIW PEK JUN
 WONG ING CHIEW
 WONG KHEE SHENG
 YEAP HENG YI
 YEOH CHOON HONG
 YET SIAW YEUNG
 YING XUAN ENG
 YONG BEI SHENG
 YONG JIA JOUN

STUDENT

ALEX LAU NGIE UNG
 ALTY MYRDECCA MADIN
 BELICIA YEAP QIAO BEI
 BENJAMIN ONG JIA-JUN
 BOO KAI HSIEN
 CASEY CHONG KOK KIANG
 CHAN KOK AIK
 CHAN MING WEI
 CHAN YUAN JIE
 CHEE LAMN WEN
 CHENG YI CHEN
 CHEW JIE HENG
 CHIA BIING HANN
 CHIA KEH CHUN
 CHIA XINYI
 CHIAM WEI XIONG
 CHIANG KUAN YUN
 CHIN KWOK YEE
 CH'NG KAR WEI
 CH'NG TZE YU
 CHOO HAO RUI
 CHOO ZHEN SHUEN
 CHUI YAO SHENG
 DOMINIC LAU
 EDMUND LEE JIN SHENG
 ENG NOBEL
 EVELYN LIM YIK MING
 FOO XIU LI
 GAN SEEM
 GAN WEN HAN
 GOH REUN CUAN
 HARRIWIN A/L SELVARAJOO
 HII CHEEE LIANG
 HO EU SHENG
 IGNAVIER NG ZHI YONG
 ILI NAJIHAH BINTI MAMAT KHALID
 IMAN 'IFFAH BT ISMAIL
 JONAH LIN JIAN HUA
 KANG SUNG HO
 KIM SEUNG WOOK
 KOH YEE SWEN
 KONG YONG FAI
 KOR YU BOON
 LAW WEN XUAN
 LEE CHEE SIM
 LEE KIAN BOON
 LER SONG LIM
 LIAU YEN TONG

From the Editor



Moving on to our second year of the competition, we managed to attract double the number of participants from 10k last year to about 20k this year. I am pleasantly surprised by the turnout which I think indicates a growing appreciation of mathematics culture among Malaysian students and teachers. More important than winning is the realization that mathematics can be fun and engaging and ultimately, enlightening.

However, doubling the number of contestants means doubling the workload for the KMC team. Therefore, I would like to thank all members of the KMC team for running a national event at this scale competently, with much patience.

We are glad to see many returning schools from KMC 2013. I hope this is a good sign for things to come. Thanks to all participants and teachers.

M. Suhaimi Ramly

KMC  facebook Fanpage

The KMC Secretariat is proud to announce our very own Facebook fan page. You can find us at:

[/KangarooMathMalaysia](#)

We regularly update our page to inform you on the goings-on at KMC as well as to update you on upcoming events.

Make sure to drop by our page and post any questions you may have on our Wall. Our team will be happy to address your questions!

Or you can just show us your support and give a friendly 'Like' and share our fan page with your friends.

**Answers to the selected
 KMC 2014 problems
 (page 3)**

1) 7 2) 7 3) 17
 4) 7:46am 5) 20% 6) 2.

CONTACT US

Phone: 03 41317672
 Fax: 03 41490572
 Email: info@kangaroomath.com.my
 Web: kangaroomath.com.my
 FB: /KangarooMathMalaysia
 Twitter: kangaroomathMY

Published by: Ardent Educational Consultants Sdn. Bhd., No. 100-1, Jalan 2/23A, Taman Danau Kota, 53300 Setapak, KL.

Printed by: e-print Solutions Sdn. Bhd., No.3 Lorong Brunei Tiga, Off Jalan Pudu, 55100 Kuala Lumpur.

LIM BOON CHIA
 LIM CHEE YEW
 LIM KAH JUN
 LIM SOO YEE
 LIM WAY SHEARN
 LIM WOO SHAUN
 LIM YOU SHENG
 LOO XUAN SONG
 LUZIANA JOILIN
 MUHAMAD ARIF BIN ABDUL MUTALIB
 MUHAMMAD AMIRUL BIN MOHD RODZI
 MUHAMMAD SYAHMI BIN ISMAIZANI
 NEOH YONG SENG
 NG TZE DONN
 NG YONG JIAN
 NICHOLAS WONG MING CHEN
 NUR ALIA NABIHAH BT ADNAN
 NUR ALIB BIN HARIYONO
 NYAM YEE SHIN
 ONG SIK JUN
 ONG SUI CHANG
 ONG XIN KAI
 OOI KEE AUN
 POH CHUN HOU
 PUA KAI EARN
 QUAT YEAN CHIN
 SARAH SABRINA BINTI SHAHARUDIN
 SEAN LEE
 SOO JASMIN
 SYAHIDAH BT MOHD KHAIRI
 TAN HAO HAO
 TAN KE YI
 TAN WEI JIA
 TAN WEN YANG JUSTIN
 TAN YAN KANG
 TAY YEE CHOON
 TEE JUN REN
 TEH ZEE HOE
 TEH CHUN YONG
 TEO SHIN CHIN
 TEOH SIEW HUEY
 TONG CHEN YANG
 TONG JIE YI
 TOONG KUNG YAN
 WONG CHIN FONG
 WONG SOON JIE
 WOO YING ZHENG
 YEOH KAR KEAT
 YEOH ZI SONG