INFORMATION PACK

KANGAROO MATH COMPETITION 2024

LARGEST MATHEMATICS COMPETITION IN THE WORLD

SCAN ME

COMPETITION DAY
8th MAY

Kangaroo Math Malaysia
kangaroomathmalaysia
malaysianeducompetition
www.kangaroomath.com.my

INTRODUCTION

The Kangaroo Math Competition is an international school-level mathematics competition that is organized by Association Kangourou sans Frontiëres (AKSF), a transnational educational group based in Paris. Founded in the early 1990s, the Kangaroo Math Competition is currently the world's largest math competition with more than 6 million participants from 98 countries in 2023. Malaysia was inducted into AKSF in 2012 and is sanctioned by AKSF to organize Kangaroo in Malaysia since 2013. The Kangaroo Math Competition in Malaysia has been participated by almost 400,000 participants from 2013 until 2022. In Kangaroo 2023, there were more than 46,000 participants representing over 1,552 schools from all over Malaysia.

OBJECTIVES

- To popularize mathematical enrichment activities among students and teachers in Malaysia.
- To allow Malaysian school students to achieve certification and recognition from an internationally prominent education body.
- To expose students to interesting math problems designed by internationally renowned math educators.
- To allow students to apply their knowledge in Mathematics that they have learned in school.

WHO SHOULD PARTICIPATE ?

- All school students who would like to increase their understanding and skills in mathematical problem-solving.
- Kangaroo is catered to all school students from Year 1 to Form 6 with six different categories with differing levels of difficulty.

BENEFITS FOR STUDENTS

- Increases students' interest in Mathematics.
- Equips the students with 21st century skills such as problem-solving and analytical thinking skills.
- Sharpens students' abilities to answer **Higher-Order Thinking Skill (HOTS) questions**.
- Exposes the students to internationally recognised questions.
- Offers the students value for their future academic journey.

ROAD TOUR

We went to different schools in Malaysia that invited us to talk about our competition. We made it fun by doing some enjoyable activities with the students.

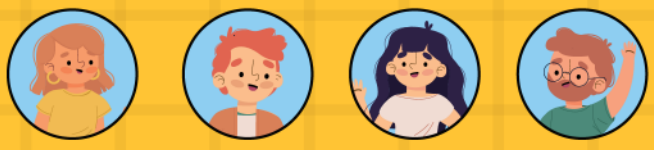
2023 AWARD CEREMONY

Students who achieved the Gold Award were invited to a special award ceremony to celebrate their amazing accomplishment!

COMPETITION FORMAT

- 20-24 Multiple Choice Questions
- Answering Time 75 Minutes
- Paper-based Competition
- Invigilated by the assigned Teacher-In-Charge

LANGUAGES



English | Bahasa Melayu | Mandarin | Tamil (For SJKT schools only)

COMPETITION PROCEDURE

- The students should only be registered by the designated Teacher-In-Charge.
- Register at **www.contesthub.my/register**.
- Fill in the teacher's and school's details.
- Choose offline method.
- Fill in the student's details in the **List of Competition**.
- Complete the payment.
- Question packages and Teacher's Guide booklet will be sent to schools or centers.
- On the competition day, the schools will conduct the contest at their own venues.
- Schools are responsible for enforcing the regulations of the competition.
- Schools will send back the OMR answer sheets to the Secretariat.
- The results will be announced 4 months after the competition.

CATEGORIES

Students should be registered into the following categories according to their academic year in 2024/2025 session.

There are 6 categories:

Pre-Ecolier	: **Year 1 & 2**
Ecolier	: Year 3 & 4
Benjamin	: Year 5 & 6
Cadet	: **Year 7 & 8** *(Form 1 & 2)*
Junior	: Year 9 & 10 *(Form 3 & 4)*
Student	: Year 11 & 12 *(Form 5, 6 & Pre-University)*

AWARDS & CERTIFICATES

- Every participant will receive a certificate of participation jointly issued by AKSF, signed by the Chairman of the Board, Ms. Meike Akveld, and Mr. Suhaimi Ramly, Director of Kangaroo Math Malaysia.

PRE-ECOLIER

This is my grandfather's birthday cake. A large candle stands for 10 years and a small candle stands for 1 year. How old is my grandfather?

Berikut ialah kek hari jadi datuk saya. Lilin besar bermaksud 10 tahun dan lilin kecil bermaksud 1 tahun. Berapakah umur datuk saya?

(A) 65 (B) 66 **(C) 76** (D) 77 (E) 78

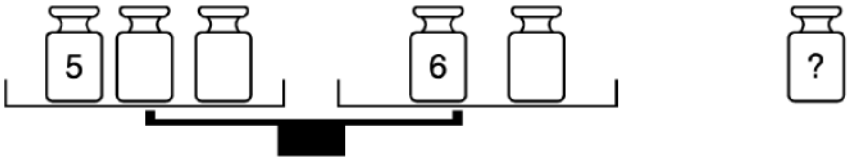
Solution

There are 7 big candles and 6 small ones on the cake. So grandfather is 7×10+ 6×1 = 76 years old.

ECOLIER

There are six weights of 1, 2, 3, 4, 5 and 6 kg. Rossitza puts five of them on the scales and puts one weight aside. The scales are balanced. Which weight did she put aside?

Terdapat enam pemberat 1, 2, 3, 4, 5 dan 6 kg. Rossitza meletakkan lima daripadanya di atas penimbang dan mengetepikan satu pemberat. Penimbang tersebut seimbang. Pemberat manakah yang dia ketepikan?



(A) 1 kg (B) 2 kg (C) 3 kg (D) 4 kg (E) 5 kg

Solution

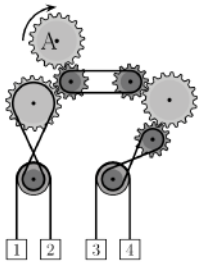
Weights 5 and 6 kg are already used. If we do not use weights 2 or 4 kg the total weight of the remaining weights will be expressed as an odd number (19 and 17 kg accordingly). In this case it is impossible to divide the weights so that the scales come in balance. So the answer is 1 or 3 kg. Let's check them. Without the weight 1 kg the total weight will be 2 + 3 + 4 + 5 + 6 = 20 kg. So on each bowl of the scales should be 10 kg. It is possible if we put 5 + 3 + 2 on one bowl and 4 + 6 on the other bowl. It matches with the picture. Without the weight 3 kg the total weight will be 1 + 2 + 4 + 5 + 6 = 18 kg. So on each bowl should be 9 kg. It is possible if we put 5 + 4 on one bowl and 6 + 2 + 1 on the other bowl. But that does not match with the picture.

SAMPLE QUESTIONS

BENJAMIN

The gear marked A is turned clockwise, as shown. Which two boxes will move upwards?

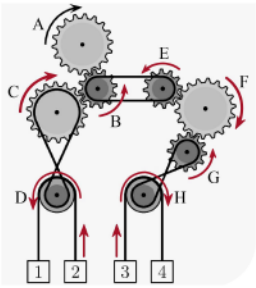
Gear bertanda A dipusingkan mengikut arah jam, seperti yang ditunjukkan. Dua kotak manakah akan bergerak ke atas?



(A) 1 & 4 **(B) 2 & 3** (C) 1 & 3 (D) 2 & 4 (E) Cannot be determined

Solution

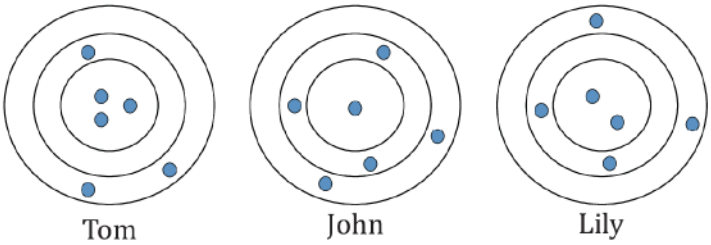
1. Gear A turning clockwise makes Gear B turning anticlockwise.
2. Gear B turning anticlockwise makes Gear C turning clockwise and Gear E turning anticlockwise.
3. Gear C turning clockwise makes Wheel D turning anticlockwise,hence bringing Box 2 up.
4. Meanwhile, Gear E turning anticlockwise makes Gear F turning clockwise which makes Gear G turning anticlockwise. Finally, Wheel H turns clockwise, bringing Box 3 up.



CADET

Tom, John and Lily each shot six arrows at a target. Arrows hitting anywhere within the same ring score the same number of points. Tom scored 46 points and John scored 34 points, as shown. How many points did Lily score?

Tom, John dan Lily masing-masing menembak enam anak panah ke sasaran. Anak panah yang mengenai gelang sasaran yang sama akan mendapat bilangan mata yang sama. Tom mendapat 46 mata dan John mendapat 34 mata, seperti yang ditunjukkan. Berapakah mata yang diperoleh Lily?



(A) 37 (B) 38 (C) 39 **(D) 40** (E) 41

Solution

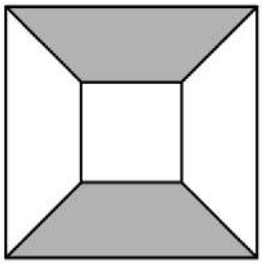
Observe that if we add the numbers of hits in each ring from Tom and John together they hit each ring exact the double amount of times of the number of hits of Lily. Since the sum of the points of Tom and John is 46 + 34 = 80, Lily scored 40 points.

SAMPLE QUESTIONS

JUNIOR

A large square of side-length 10 cm contains a smaller square of side-length 4 cm, as shown in the figure. The corresponding sides of the two squares are parallel. What percentage of the large square is shaded?

Sebuah segi empat sama dengan panjang sisi 10 cm mengandungi segi empat sama yang lebih kecil dengan panjang sisi 4 cm, seperti yang ditunjukkan dalam rajah. Sisi yang sepadan bagi kedua-dua segi empat sama adalah selari. Berapakah peratusan kawasan segi empat sama yang besar itu yang berlorek?



(A) 25% (B) 30% (C) 40% **(D) 42%** (E) 45%

Solution

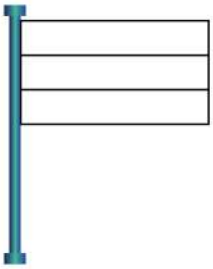
Because the big square is of 10 cm and the smaller is of 4 cm the sum of the heights of the two trapezoids is 6 cm. Then we got for the area of both trapezoids,

$$\frac{10\,\text{cm} + 4\,\text{cm}}{2} \cdot 6\,\text{cm} = 42\text{cm}^2$$

STUDENT

Emma has four different coloured pens. She wants to colour the three-striped rectangular flag shown in the figure so that each stripe is a single colour and no two adjacent stripes are the same colour. In how many ways can she do this?

Emma mempunyai empat pen berlainan warna. Dia mahu mewarnakan bendera berbentuk segi empat tepat yang mempunyai tiga jalur seperti dalam rajah berikut. Setiap jalur mempunyai satu warna dan tiada dua jalur bersebelahan mempunyai warna yang sama. Berapakah bilangan cara dia boleh melakukan sedemikian?



(A) 24 (B) 27 (C) 32 **(D) 36** (E) 64

Solution

The top stripe can be in any of the four colors. Each of these can be combined with three of the colors, as no two adjoining stripes can be of the same color. The bottom stripe can again be any of the three colors not in the middle. This means that there are a total of $4 \cdot 3 \cdot 3 = 36$ possible flags.

IMPORTANT DATES

EARLY BIRD REGISTRATION
10% DISCOUNT
RM36
PER PARTICIPANT

NORMAL REGISTRATION
RM40
PER PARTICIPANT

Payment method:
Online payment (BillPlz) or manual payment (cheque or local order (LO))

IMPORTANT DATES

EARLY BIRD REGISTRATION	1st DEC 2023 – 15th MAR 2024
NORMAL REGISTRATION	16th MAR – 5th APRIL 2024
KANGAROO DAY	8th MAY 2024
OMR ANSWER SHEETS DEADLINE	24th MAY 2024
RESULT ANNOUNCEMENT	SEPTEMBER 2024

HOW TO REGISTER

Registration can be made at www.contesthub.my

REGISTER NOW!

CONTACT INFO

KANGAROO MATH MALAYSIA
c/o ARDENT EDUCATIONAL CONSULTANTS SDN BHD
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53300 SETAPAK, KUALA LUMPUR

018-392 0204 (Mrs. Suri) / 018-360 4143 (Mrs. Jannah) / 010-272 7849 (Ms. Najia)
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