

Programme Booklet



LIMO 2018



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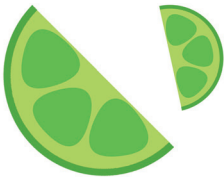
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KONINKLIJKE
HOLLANDSCHE MAATSCHAPPIJ
DER WETENSCHAPPEN



UNIVERSITY
OF TWENTE.



In cooperation with

Creators of the exercises

Harry Smit MSc.
Ir. Harold de Boer
Prof. dr. Hendrik Lenstra
Prof. dr. Gunther Cornelissen
Prof. dr. Jaap Top
Eduardo Ruíz Duarte MSc.
Stijn Cambie MSc.
Dr. Daniel Valesin
Leslie Molag MSc.
Prof. dr. Frans Oort
Prof. dr. Lex Schrijver
Prof. dr. Robert Tijdeman

Committee members

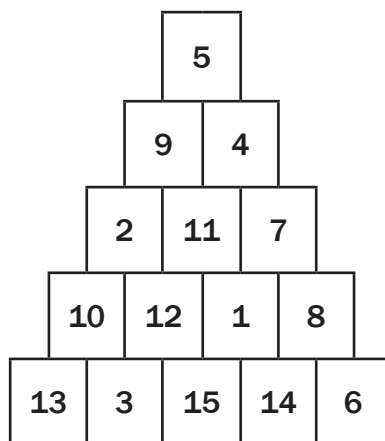
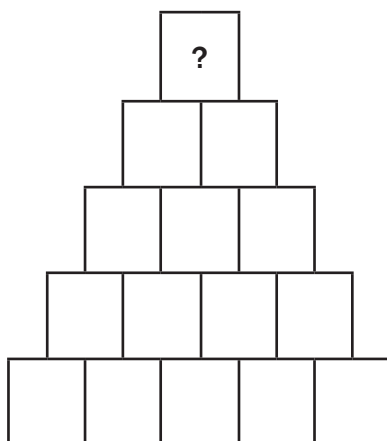
f.l.t.r.
Ruben Ijpma, Secretary
Josselin Kooij, Acquisition
Carina Schoenmaker, Chair
Leander van Beek, IT & Promotion
Sven Cats, Competition Commissioner



Preface

The top of the pyramid

The below pyramid is filled with numbers in such a way that every number equals the difference between the two numbers below it. In principle it is very easy to fill a pyramid in this way. Insert five random numbers in the bottom row, and the rest follows unequivocally.



The problem gets a little trickier if we want to use 15 different numbers. And it becomes a fun challenge if these 15 numbers must be consecutive. It is possible. The pyramid in the picture contains the numbers 1 through 15. Is it possible to find another solution to the same problem with these same 15 numbers? And will the number 5 still be at the top?

Is this math? It seems to me that most people with the ability to solve this type of puzzles tend to have mathematical abilities. Not all mathematicians enjoy solving puzzles like these. To some mathematicians, such puzzles are a parody of pure mathematics. Even some of those purist mathematicians will become enthused if the question to be solved is how many odd numbers such a differential pyramid can contain at maximum. And does a solution with the maximum number of odd numbers necessarily have an odd number on top?

Today will be about filling just such a pyramid. Not with numbers this time, but with the very original names of your teams. Here again, the differences between your teams will determine the positions within the pyramid, but in a different way. The best team will be on top. To determine which team that is, is a nut for the jury to crack. But to you it will all be math.

Have fun finding the solutions,

Harold de Boer,
Director R&D,
Transtrend bv.





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Werken aan de basis van belangrijke beslissingen

Het CBS maakt gebruik van big data zoals satellietdata en social media.
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Programme

<i>Time</i>	<i>Event</i>
09:30	Reception with coffee and tea
10:30	Kick-off
10:45	Opening Lecture by Ieke Moerdijk
11:45	Lunch
13:00	Start of the competition
16:15	Drinks and results
19:00	Dinner



Locations

Main location:

Energy Academy
Nijenborgh 6
Room 5159.0029

Competition locations:

Energy Academy
Nijenborgh 6
Rooms 5159.0010, 5159.0009 and 5159.0114

Bernoulliborg
Nijenborgh 9
Room 5161.0165

Linnaeusborg
Nijenborgh 7
Room 5173.0055

Groups will be divided over the rooms.





Energy Academy

Bernoulliborg



Linnaeusborg



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Chair

Carina Schoenmaker

Hello, I am Carina Schoenmaker, 23 years old and chair of the LIMO 2018 committee. I study mathematics and biology and furthermore I love to play board games, hike in the woods and cook, mostly because I love to eat too. Together with the rest of the committee I will try my best to make the LIMO an exciting day of maths and being together with people who love mathematics as much as we do.



Secretary

Ruben Ijpma

Hi! I am 22, from Groningen, and a third year mathematics student with interest in pure analysis and topology. I spend a lot of time studying in the university library, and occasionally I am sociable. Further, I like trance music, Formula 1 and the Kuratowski closure-complement problem. I am no star in olympiad questions, but as the secretary I will address any other question you have: limo@fmf.nl. See you on May 18th!



Vind jouw droombaan!



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Actuarieel Rekenaar

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Of ben je juist goed in het vertalen van de gebruikersbehoefte naar effectieve en betrouwbare IT-oplossingen? En kun jij de perfecte link leggen tussen gebruikers en programmeurs van informatiesystemen? Start met het traineeship Business IT en word opgeleid tot data-, informatie- of businessanalist!

Solliciteren bij Talent&Pro?

Wil jij binnen korte tijd enorm veel werkervaring opdoen bij de grootste spelers zoals ABN AMRO, Delta Lloyd en Regio? Zie jij jezelf al rond- rijden in één van onze auto's? En wil jij na je studie aan de slag als Actuarieel Rekenaar of werken aan de meest complexe IT-vraagstukken? Bekijk onze website en neem contact op met één van onze recruiters!



TU Delft

Acquisition

Josselin Kooij

I am 23, from Drenthe, and a third year master student in education in Groningen. I am currently in the board of the FMF and have been a teacher in mathematics in the years before that. I like playing guitar, singing, dancing and being creative. I competed in the LIMO three years ago and I would love to see how this years competition will turn out! Hope to see you on May 18th!



IT & Promo

Leander van Beek

Hiya! My name is Leander and I'm a 21 year old Theoretical Physicist and Astronomer. This makes me outlier in the group. I am however very fanatic about the maths I encounter and find organising activities such as the LIMO a rewarding challenge. In my little spare time I enjoy running and solving project Euler problems.



Competition Commissioner

Sven Cats

Hi, I'm Sven. I'm 19 years old and a second year mathematics student in Groningen. In my free time I enjoy playing futsal, doing card tricks and looking at maths-themed memes. As competition commissioner, I had the great honour to contact many famous mathematicians, including some of my personal heroes, asking them whether they had any questions for this year's LIMO. These questions will hopefully provide more than enough fun and challenge for all of you. See you in Groningen!



On behalve of the committee:

Have fun!





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