



Panamanian Foundation for the Promotion of Mathematics

FUNDAPROMAT

The Panamanian Foundation for the **Promotion of Mathematics** (FUNDAPROMAT) seeks to change the world's perception so that one and all can experience mathematics as accessible, relevant and inherently joyous.



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Join our math outreach activities, which are free and open to the general public!

Visit our Calendar of Events at fundapromat.org/ en/events

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JANUARY 2022

19 5:00 PM -6:00 PM



Fourth Magic Show with Isaac Reiter

The Fourth Magic Show with Isaac Reiter took place on Wednesday, January 19th, 2022 from 5 pm until 6 pm, with the magician Isaac Reiter as our invited speaker. This virtual event was free and open to the general public. In this virtual event, Isaac Reiter shared his passion for magic and for mathematics with the participants. Through interactive illusions, close up miracles and fascinating magic tricks with Rubik's cubes, playing cards and more, the speaker amazed the audience with a spectacular show.









20

5:00 PM -6:00 PM



Webinar on Math and Kirigami

The Webinar on Math and Kirigami took place on Thursday, January 20th, 2022 from 5 pm until 6 pm, with Miriam Baez, math communicator and academic of the Actuary School in the Veracruz Anahuac University in Mexico, as our invited speaker. This virtual event was free and open to the general public. The invited speaker explained that kirigami is the art similar to origami in which cutting the paper is permitted. Miriam Baez described the importance that kirigami has in math learning and shared how geometric patterns and symmetries play a fundamental role in this art. The speaker also showed the necessary cuts to create several beautiful examples of kirigami.









21

5:00 PM -6:00 PM



Virtual Origami Class #63

The Virtual Origami Class #63 took place on Friday, January 21st, 2022 from 5 pm until 6 pm, with the origami artist David Medina as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed one $15~\rm cm~x~15~cm$ paper square and a pencil or a black marker. David Medina then taught how to fold a tiger, which is a traditional origami model. This origami design is appropriate for 8-year-olds and above.





27

5:00 PM -6:00 PM



Thirtieth Virtual Encounter with Outstanding Mathematicians

The thirtieth Virtual Encounter with Outstanding Mathematicians took place on Thursday, January 27th, 2022 from 5 pm until 6 pm. Liliana Forzani, Professor at the National University of Litoral in Argentina and President of the Mathematical Union of Latin America and the Caribbean (UMA-LCA), was our invited speaker. This virtual event was free and open to the general public.

On this thirtieth Encounter, Liliana Forzani shared anecdotes of her personal life and her professional journey as a female mathematician, highlighting that thanks to her math studies, she has had the opportunity to meet wonderful people and travel to amazing countries. The speaker also presented on "And the Oscar goes to..." in which she explained the preferential voting system that is used to determine the Oscar winners. Liliana Forzani described that the 4 principles that we expect from a fair voting system are: the last will not be the first, they beat them all head to head, multiple districts and more cannot be less. The speaker also shared how these 4 principles are related to the Theorem of Kenneth Arrow, who is a math economist winner of the Nobel Prize.





JANUARY - FEBRUARY 2022

28 5:00 PM -6:30 PM



Virtual Origami Class #64

The Virtual Origami Class #64 took place on Friday, January 28th, 2022 from 5 pm until 6:30 pm, with the origami artist David Martinez as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed two 20 cm x 20 cm paper squares. David Martinez then taught how to fold a house box, which is an origami model created by the speaker. This origami design is appropriate for 8-year-olds and above.





30

10:00 AM -1:00 PM



Math Carnival at Explora

On Sunday, January 30th, 2022 from 10 am until 1 pm we ran a Math Carnival full of fun math activities for all ages. This free in-person event for the entire family highlighted the female Panamanian mathematicians Yadira Saldaña, Zaida Alonzo and Yorleny Camarena and took place at the Explora Center of Sciences and Art in Condado del Rey, Panama City.









2 5:00 PM -

6:00 PM



Twelfth Math Webinar in English

The twelfth Math Webinar in English took place on Wednesday, February 2nd, 2022 from 5 pm until 6 pm with the recreational mathematician Adam Atkinson as our invited speaker. This virtual event was free and open to the general public.

In this twelfth Math Webinar in English, Adam Atkinson presented on "Maths and Science Stories." The speaker shared several stories, including water in the desert, the thing with the right angle, the supermarket story, the barometer story, the heavy boots story and how to make the Earth seem flat. This virtual event was co-organized by the Mathematical Association of America (MAA).



3 5:00 PM -6:00 PM



Webinar on How Can We Construct a Sierpinski Fractal with Paper?

The Webinar on How Can We Construct a Sierpinski Fractal with Paper? took place on Thursday, February 3rd, 2022 from 5 pm until 6 pm, with Jose Luis Muñoz, President of the "Emma Castelnuovo" Society of Math Professors from Madrid, as our invited speaker. This virtual event was free and open to the general public.

This virtual event was free and open to the general public. The invited speaker explained how to create a fractal book with several printer paper sheets, a ruler, scissors and glue. Jose Luis Muñoz shared that a fractal is a geometric object whose basic structure is repeated at different scales. The speaker described step by step how to construct the first three iterations of the Sierpinski fractal, a well-known fractal formed from a triangle. Jose Luis Muñoz also recommended to use heavy paper for better results.





4 5:00 PM -5:30 PM



Origami Comet Workshop

The Origami Comet Workshop took place on Friday, February 4th, 2022 from 5 pm until 5:30 pm. The special guest of this Instagram Live was Raquel Tovar, math teacher and FUNDAPROMAT volunteer.

In this Origami Comet Workshop, Raquel Tovar taught how to fold an origami comet, which is a traditional origami model. This Instagram Live was organized with the Chinese Panamanian Association of Professionals (APROCHIPA) and AltaPlaza Mall. You can watch the video by visiting AltaPlaza Mall's Instagram account: @altaplazamall.



5 00 AI

10:00 AM -11:30 AM



Math Jamboree #53

The Math Jamboree #53 took place on Saturday, February 5th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #53, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «<u>Cupcakes</u>» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Dr. Jeanette Shakalli for designing this activity for FUNDAPROMAT.



3:00 PM -



Visit to the SOS Children's Villages

On Saturday, February 5th, 2022 from 3 pm until 4 pm we ran an origami workshop at the SOS Children's Villages in El Dorado, which is a shelter that works for the rights of Panamanian kids, teenagers and youth.





9

4:00 PM -4:30 PM



Origami with Janeth Martinez

The Origami Facebook Live with Janeth Martinez took place on Wednesday, February 9th, 2022 from 4 pm until 4:30 pm. The special guest of this event was our volunteer Janeth Martinez from Panama.

In this Facebook Live, Janeth Martinez taught us how to fold a pigeon, which is a traditional origami model. The participants needed a 20 cm x 20 cm paper square and colored pencils. You can watch the video by visiting our Facebook account: @fundapromat or by clicking here.





10

4:00 PM -5:00 PM



Webinar on Science in The Big Bang Theory

The Webinar on Science in The Big Bang Theory took place on Thursday, February 10th, 2022 from 4 pm until 5 pm, with the science communicator Claudio Sanchez from Argentina as our invited speaker. This virtual event was free and open to the general public.

The invited speaker started the virtual event by presenting the main characters of this popular TV show. Claudio Sanchez then shared several examples in which science appears in The Big Bang Theory, such as the experiments of the double slit, of the elephant toothpaste, of the non-Newtonian fluids, of the helium balloon, of the sulfur hexafluoride balloon, of the egg in the bottle and of the potato battery. The speaker also explained the difference between the Julian and Gregorian calendars and highlighted Isaac Newton, Richard Feynman and Stephen Hawking.



11

5:00 PM -6:00 PM



Virtual Origami Class #65

The Virtual Origami Class #65 took place on Friday, February 11th, 2022 from 5 pm until 6 pm, with the origami artist Matthew Green as our invited speaker. This virtual event was free and open to the general public.

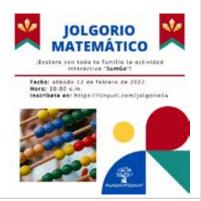
For this class, participants needed one 15 cm x 15 cm paper square. Matthew Green then taught how to fold a bird that eats, which is a traditional action model. This origami design is appropriate for 8-year-olds and above.





12

10:00 AM -11:30 AM



Math Jamboree #54

The Math Jamboree #54 took place on Saturday, February 12th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

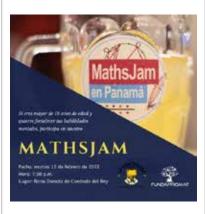
In this Math Jamboree #54, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «SumGo» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Julieta Parravicini for designing this activity for FUNDAPROMAT.





15

7:00 PM -9:00 PM



MathsJam in Panama

On Tuesday, February 15th, 2022 from 7 pm until 9 pm, the MathsJam in Panama took place, in which math enthusiasts who are 18 years old and above enjoyed exploring board games and interesting math puzzles in a pleasant environment where they had the opportunity to interact with other like-minded people. This in-person event, which is only for adults, took place in the bar La Rana Dorada of Condado del Rey, Panama City.







16 4:00 PM -4:30 PM



Kirigami with Miriam Baez

The Kirigami Facebook Live with Miriam Baez took place on Wednesday, February 16th, 2022 from 4 pm until 4:30 pm. The special guest of this event was the math communicator Miriam Baez from Mexico

In this Facebook Live, Miriam Baez taught us how to fold waves, which is a traditional kirigami model. The participants needed two printer paper sheets, glue, scissors and a pencil. You can watch the video by visiting our Facebook account: @fundapromat or by clicking here.



17

4:00 PM -5:00 PM



Thirty-First Virtual Encounter with Outstanding Mathematicians

The thirty-first Virtual Encounter with Outstanding Mathematicians took place on Thursday, February 17th, 2022 from 4 pm until 5 pm. Edith Padron, Professor at the University of La Laguna in Spain, was our invited speaker. This virtual event was free and open to the general public.

On this thirty-first Encounter, Edith Padron shared anecdotes of her personal life and her professional journey as a female mathematician. The speaker also presented on "Without curves, there is no geometry," in which she described the curves that are constructed from movement. The speaker showed a scene from the movie Agora and then defined conics. Edith Padron presented on Bernoulli's challenges, the brachistochrone curve, the water slides, the cardioid microphones and Gauss curvature.







18 5:00 PM -6:00 PM



Virtual Origami Class #66

The Virtual Origami Class #66 took place on Friday, February 18th, 2022 from 5 pm until 6 pm, with the origami artist Jaciara Grzybowski as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed one 15 cm x 15 cm paper square. Jaciara Grzybowski then taught how to fold a message door, which is an origami model created by the speaker. This origami design is appropriate for 8-year-olds and above.

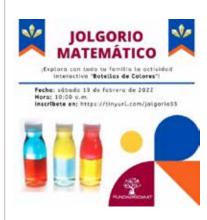






19

10:00 AM -11:30 AM



Math Jamboree #55

The Math Jamboree #55 took place on Saturday, February 19th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #55, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «<u>Colored Bottles</u>» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Marleny Vargas for designing this activity for FUNDAPROMAT.





20

2:00 PM -5:00 PM



Math Carnival at AltaPlaza Mall

On Sunday, February 20th, 2022 from 2 pm until 5 pm we ran a Math Carnival full of fun math activities for all ages. This free in-person event for the entire family highlighted the female Panamanian mathematicians Itzy Lajon, Lorena Arias and Ana Tordecilla and took place at AltaPlaza Mall, Level 1, in front of the Society Beauty Club, Panama City.









24

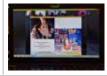
4:00 PM -5:00 PM



Webinar on A Mathematical Journey through the Pre-Columbian Cultures – Part II

The Webinar on A Mathematical Journey through the Pre-Columbian Cultures – Part II took place on Thursday, February 24th, 2022 from 4 pm until 5 pm with Ximena Catepillan, Professor Emeritus of Mathematics at Millersville University in Pennsylvania, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker reviewed what she presented in October 2021 when we visited Chile, Peru, Bolivia, Brazil and Guatemala. Dr. Ximena Catepillan in this occasion also took us to Cuba, Mexico and the United States, where we explored several mathematical aspects of the indigenous populations that inhabited those countries. This virtual event was co-organized with the Society of Mathematics of Chile (SOMACHI).



25

5:00 PM - 6:00 PM



Virtual Origami Class #67

The Virtual Origami Class #67 took place on Friday, February 25th, 2022 from 5 pm until 6 pm with the origami artist Noelia Avila as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed eight $14 \, \mathrm{cm} \, \mathrm{x} \, 7 \, \mathrm{cm}$ paper rectangles. Noelia Avila then taught how to fold the model Carla, which is an origami model created by Maria Sinayskaya. This origami design is appropriate for 8-year-olds and above.







26

10:00 AM -11:30 AM



Math Jamboree #56

The Math Jamboree #56 took place on Saturday, February 26th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #56, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «<u>Unarmed Rails</u>» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Julieta Parravicini for designing this activity for FUNDAPROMAT.







5:00 PM -6:00 PM



Thirteenth Math Webinar in English

The thirteenth Math Webinar in English took place on Wednesday, March 2nd, 2022 from 5 pm until 6 pm with Lauren Siegel, Director of the MathHappens Foundation, as our invited speaker. This virtual event was free and open to the general public.

In this thirteenth Math Webinar in English, Lauren Siegel presented on "A Visit to the MathHappens Workshop!" The speaker shared several examples of math models and activities that they make in the MathHappens Foundation. Lauren Siegel explained how they connect these models to museums, libraries, and cultural and nature centers. The speaker also showed us the laser cutter in action and made various recommendations of materials and ways of making those activities that they have found successful. This virtual event was co-organized by the Mathematical Association of America (MAA).



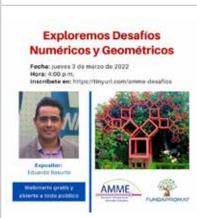








4:00 PM -5:00 PM



Webinar on Let's Explore Numerical and Geometric Challenges

The Webinar on Let's Explore Numerical and Geometric Challenges took place on Thursday, March 3rd, 2022 from 4 pm until 5 pm, with Eduardo Basurto, member of the Mexican Association of Educational Mathematics (AMME), as our invited speaker. This virtual event was free and open to the general public.

The speaker presented the following numerical challenge: pick a positive integer. If it's even, divide it by 2. If it's odd, multiply it by 3 and add 1. If you repeat these steps, what is the smallest integer that you get? Eduardo Basurto also shared two geometric challenges that involve arranging a certain number of trees. This virtual event was co-organized with the Mexican Association of Educational Mathematics (AMME).



5:00 PM -6:30 PM



Virtual Origami Class #68

The Virtual Origami Class #68 took place on Friday, March 4th, 2022 from 5 pm until 6:30 pm, with the origami artist David Medina as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed five 15 cm x 15 cm paper squares and scissors. David Medina then taught how to fold an origami puzzle, which is a traditional origami model. This origami design is appropriate for 8-year-olds and above.







Math Jamboree #57

The Math Jamboree #57 took place on Saturday, March 5th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #57, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called $\mbox{${\tt w}$}{\mbox{${\tt Drawing}}}$ in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Dr. Jeanette Shakalli for designing this activity for FUNDAPROMAT.







9 4:00 PM -4:30 PM



Origami with Janeth Martinez #2

The Origami Facebook Live with Janeth Martinez #2 took place on Wednesday, March 9th, 2022 from 4 pm until 4:30 pm. The special guest of this event was our volunteer Janeth Martinez from Panama

In this Facebook Live, Janeth Martinez taught us how to fold a swan, which is a traditional origami model. The participants needed a 20 cm x 20 cm paper square. You can watch the video by visiting our Facebook account: @fundapromat or by clicking here.



10

4:00 PM -5:30 PM



Webinar on Learn about the Game of Go

The Webinar on Learn about the Game of Go took place on Thursday, March 10th, 2022 from 4 pm until 5:30 pm, with Edgar Escobar, President of the Panamanian Go Association, as our invited speaker. This virtual event was free and open to the general public.

The speaker told us the history of the game of Go, which is a game of strategy for two people that originated in China more than 4,000 years ago. Edgar Escobar explained the rules of the game, which consists of placing, in turns, white and black stones on the intersections of the board. The speaker mentioned that every player is assigned a color before starting and once a stone is placed, it cannot be moved. Edgar Escobar also described how a stone or a group of stones can be captured and how the game is won. This virtual event was co-organized with the Panamanian Go Association.





11 5:00 PM -

6:00 PM



Virtual Origami Class #69

The Virtual Origami Class #69 took place on Friday, March 11th, 2022 from 5 pm until 6 pm, with the origami artist Aldos Marcell as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed one $10 \, \mathrm{cm} \times 20 \, \mathrm{cm}$ paper rectangle. Aldos Marcell then taught how to fold the top of a rectangular box, which is a traditional origami model. Due to Internet connection failures of our speaker, we were not able to complete the rectangular box on this occasion. This origami design is appropriate for 8-year-olds and above.



12

10:00 AM -11:30 AM



Math Jamboree #58

The Math Jamboree #58 took place on Saturday, March 12th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #58, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called "Secret Codes" in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Dr. Jeanette Shakalli for designing this activity for FUNDAPROMAT.







10:00 AM -2:00 PM



Math Bazaar Celebrating the International Day of Mathematics

On Sunday, March 13th, 2022 from 10 am until 2 pm the Math Bazaar celebrating the International Day of Mathematics took place in the Veraguas Room of the Wyndham Hotel in Albrook Mall, Panama City. This free in-person event for the entire family included the participation of the National Secretariat of Science, Technology and Innovation of Panama (SENACYT), the Panama Canal Authority (ACP), the Smithsonian Tropical Research Institute (STRI), IEEE Panama Section, the Specialized Superior Technical Institute (ITSE), the Panamanian Association for the Advancement of Science (APANAC), the Panamanian Chess Federation and the Panamanian Scrabble Association.









16



Kirigami with Miriam Baez #2

The Kirigami Facebook Live with Miriam Baez #2 took place on Wednesday, March 16th, 2022 from 4 pm until 4:30 pm. The special guest of this event was the math communicator Miriam Baez from

In this Facebook Live, Miriam Baez taught us how to fold Cantor's staircase, which is a traditional kirigami model. The participants needed two printer paper sheets, glue and scissors. You can watch the video by visiting our Facebook account: ofundapromat or by clicking here.



4:00 PM -4:30 PM

La Geometría Oculta de las Plantas





Webinar on The Hidden Geometry of Plants

The Webinar on The Hidden Geometry of Plants took place on Thursday, March 17th, 2022 from 4 pm until 5 pm, with the math communicator Antonio Perez Sanz from Spain, as our invited speaker. This virtual event was free and open to the general public.

The speaker explained that plants know about maximums and minimums, about saving, about effectiveness, about economy, about optimization, about competing for space and about defending from aggressions. Antonio Perez Sanz shared that the genetic codes of the plants are based on the principle of minimum action, that the axial, central or rotational symmetries and self similarity are abundant in the plant environment, and that the iteration of simple instructions make many specimens of plants look like fractal structures. The speaker also used GeoGebra and Winplot to show several demonstrations.



18

4:00 PM -

5:00 PM

8:00 AM -12:00 PM



FUNDAPROMAT Stand at the ITSE Bazaar

On Friday, March 18th, 2022 we were invited by the Specialized Superior Technical Institute (ITSE) to have a stand from 8 am until 12 pm in the ITSE Bazaar with fun math activities. This in-person event took place at the ITSE facilities in Tocumen, Panama City.







18

4:00 PM -5:00 PM



Virtual Origami Class #70

The Virtual Origami Class #70 took place on Friday, March 18th, 2022 from 4 pm until 5 pm, with the origami artist Deanna Kwan as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed printer paper, scissors and a pencil. Deanna Kwan then taught how to fold "The Finger Winger," which is an airplane origami model created by Michael LaFosse. This origami design is appropriate for 8-year-olds and above.







19

10:00 AM -11:30 AM



Math Jamboree #59

The Math Jamboree #59 took place on Saturday, March 19th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #59, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called <u>«Inspector Gadget»</u> in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Romina Busain and Julieta Parravicini for designing this activity for FUNDAPROMAT.

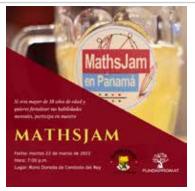






22

7:00 PM -9:00 PM



MathsJam in Panama #2

On Tuesday, March 22nd, 2022 from 7 pm until 9 pm, the MathsJam in Panama #2 took place, in which math enthusiasts who are 18 years old and above enjoyed exploring board games and interesting math puzzles in a pleasant environment where they had the opportunity to interact with other like-minded people. This in-person event, which is only for adults, took place in the bar La Rana Dorada of Condado del Rey, Panama City.





24

4:00 PM -5:00 PM



Thirty-Second Virtual Encounter with Outstanding Mathematicians

The thirty-second Virtual Encounter with Outstanding Mathematicians took place on Thursday, March 24th, 2022 from 4 pm until 5 pm. Dr. Gabriela Araujo, Researcher at the National Autonomous University of Mexico (UNAM) and President of the Mexican Mathematical Society (SMM), was our invited speaker. This virtual event was free and open to the general public.

On this thirty-second Encounter, Gabriela Araujo shared anecdotes of her personal life and her professional journey as a female mathematician. The speaker also presented on "Mathematics and Popularity on Facebook," in which she described that people considered popular on Facebook have many friends, quickly cover the network and are strategically placed among their friends. Gabriela Araujo then translated this to mathematics, specifically to the concept of graphs, and used the Erdos number as an example.





25

12:00 PM -1:00 PM



Webinar on Geometry to Sample Food

The Webinar on Geometry to Sample Food took place on Friday, March 25th, 2022 from 12 pm until 1 pm, with David Orden, member of the Spanish Mathematical Royal Society (RSME), as our invited speaker. This virtual event was free and open to the general public.

The speaker explained what sampling food means and how it works. David Orden then described the SensoGraph program in which you place similar concepts close to each other and different concepts far away from each other. For example, in the virtual event we made an experiment in which the participants compared the following foods: pizza, pasta, paella, sushi, tacos, hot dog, hamburger, sandwich, fried chicken and fish & chips. This virtual event was co-organized with the Spanish Mathematical Royal Society (RSME).



25

5:00 PM -6:00 PM



Virtual Origami Class #71

The Virtual Origami Class #71 took place on Friday, March 25th, 2022 from 5 pm until 6 pm, with the origami artist Matthew Green as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed one 15 cm x 15 cm paper square and scissors. Matthew Green then taught how to fold a shrimp, which is a traditional origami model. This origami design is appropriate for 8-year-olds and above.





26

10:00 AM -11:30 AM



Math Jamboree #60

The Math Jamboree #60 took place on Saturday, March 26th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #60, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called <u>"The Egyptian Tangram Returns"</u> in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Marco Serrano and Marleny Vargas for designing this activity for FUNDAPROMAT.







27

1:00 PM -4:00 PM



Math Carnival at the Biomuseum

On Sunday, March 27th, 2022 from 1 pm until 4 pm we ran a Math Carnival full of fun math activities for all ages. This free in-person event for the entire family highlighted the female Panamanian mathematicians Samar Chirinos, Iveth Martinez and Veronica Garcia and took place at the Biomuseum, Panama City.











MARCH - APRIL 2022

29

7:00 AM -4:00 PM

30

7:00 AM -6:00 PM



Road Trip to Veraguas

On Tuesday, March 29th and Wednesday, March 30th, 2022 a FUNDAPROMAT road trip took place from 7 am until 6 pm, in which we talked to directors and teachers from the following academic centers in the province of Veraguas:

- Agustin Perez Colmenares Educational Center
- Manuela H. de Perez Educational Center
- Saint James School in Santiago
- San Vicente de Paul School in Santiago
- Jose Santos Puga School in Santiago
- Omar Torrijos Herrera Professional Institute in Santiago
- Institute of the Isthmian Merchant Navy in Santiago
- San Juan Modern School in Santiago









31

4:00 PM -5:30 PM



Webinar on The Mathematics of Motion

The Webinar on The Mathematics of Motion took place on Thursday, March 31st, 2022 from 4 pm until 5:30 pm with Dr. Eduardo Mancera, Vice President of the Interamerican Committee on Math Education (CIAEM), as our invited speaker. This virtual event was free and open to the general public.

The invited speaker highlighted that in order to understand complex situations, the best strategy is to simplify the conditions and analyze the most simple cases. Dr. Eduardo Mancera described several applications of differential equations, including the dynamics of a population, radioactive decay, the spread of a disease, chemical reactions, among others. The speaker also used GeoGebra to show concrete examples of the mathematics of motion. This virtual event was co-organized by the Mexican Association of Educational Mathematics (AMME).





5:00 PM -6:30 PM



Virtual Origami Class #72

The Virtual Origami Class #72 took place on Friday, April 1st, 2022 from 5 pm until 6:30 pm, with the origami artist Jaciara Grzybowski as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed four 10 cm x 10 cm paper squares and scissors. Jaciara Grzybowski then taught how to fold a snowflake MOLINO, which is an origami model created by the speaker. This origami design is appropriate for 8-year-olds and above.







2 10:00 AM -11:30 AM



Math Jamboree #61

The Math Jamboree #61 took place on Saturday, April 2nd, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #61, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called <u>*Oottoko*</u> in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Julieta Parravicini and Jai Gomer for designing this activity for FUNDAPROMAT.







4:00 PM -5:30 PM



Webinar on Challenges When Teaching Decimal Numbers

The Webinar on Challenges When Teaching Decimal Numbers took place on Thursday, April 7th, 2022 from 4 pm until 5:30 pm with Alicia Avila, member of the Mexican Association of Educational Mathematics (AMME), as our invited speaker. This virtual event was free and open to the general public.

The invited speaker highlighted the importance of students understanding that the decimal numbers are different from the natural numbers. Alicia Avila also described the relation between decimal numbers and fractions. The speaker showed the multiple ways to represent the decimal numbers and shared several ideas on how to explain these concepts in a classroom with high school students. This virtual event was co-organized by the Mexican Association of Educational Mathematics (AMME).





5:00 PM -6:00 PM



Virtual Origami Class #73

The Virtual Origami Class #73 took place on Friday, April 8th, 2022 from 5 pm until 6 pm, with the origami artist David Medina as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed one 15 cm x 15 cm paper square and glue. David Medina then taught how to fold a rabbit (finger puppet), which is a traditional origami model. This origami design is appropriate for 8-year-olds and above.





9 10:00 AM -11:30 AM



Math Jamboree #62

The Math Jamboree #62 took place on Saturday, April 9th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #62, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «<u>Stacking Stones</u>» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Gisela Diaz and Marleny Vargas for designing this activity for FUNDAPROMAT.





9 3:00 PM -5:00 PM



Math Party at AltaPlaza Mall

On Saturday, April 9th, 2022 from 3 pm until 5 pm we ran a Math Party full of fun math activities for all ages. This free in-person event for the entire family took place at AltaPlaza Mall, Level 1, in front of Vine Vera. Panama City.











13

5:00 PM -

6:30 PM



Fourteenth Math Webinar in English

The fourteenth Math Webinar in English took place on Wednesday, April 13th, 2022 from 5 pm until 6:30 pm with the mathemagician Arthur Benjamin, Smallwood Family Professor of Mathematics at Harvey Mudd College, as our invited speaker. This virtual event was free and open to the general public.

In this fourteenth Math Webinar in English, Dr. Arthur Benjamin, who is also a professional magician, presented on "Mathemagics!" The speaker demonstrated how to mentally square numbers of several digits faster than a calculator, compute the day of the week of any date in history and perform other amazing feats of mind. Dr. Arthur Benjamin also explained the math concepts behind his mathemagical show. This virtual event was co-organized by the Mathematical Association of America (MAA).









14

4:00 PM -5:00 PM



Webinar on The Mathematics in Ketchup

The Webinar on The Mathematics in Ketchup took place on Thursday, April 14th, 2022 from 4 pm until 5 pm with Sofia Lopez, member of the Gender Commission of the Ecuadorian Society of Mathematics (SEdeM), as our invited speaker. This virtual event was free and open to the general public.

The invited speaker started the virtual event by explaining what a fluid is and what the difference between a Newtonian fluid and a non-Newtonian fluid is. Sofia Lopez then described the property of viscosity in fluids and mentioned several applications that motivate the analysis of non-Newtonian fluids, like the study of avalanches, lava and art. This virtual event was co-organized by the Ecuadorian Society of Mathematics (SEdeM).





15 5:00 PM -6:00 PM



Virtual Origami Class #74

The Virtual Origami Class #74 took place on Friday, April 15th, 2022 from 5 pm until 6 pm, with the origami artist Keila Correa de Paula as our invited speaker. This virtual event was free and open to the general public.

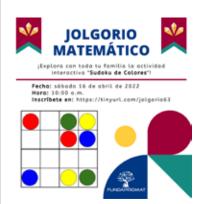
For this class, participants needed one $15 \text{ cm} \times 15 \text{ cm}$ paper square. Keila Correa de Paula then taught how to fold a Hewa dog, which is an origami model created by the speaker. This origami design is appropriate for 8-year-olds and above.





16

10:00 AM -11:30 AM



Math Jamboree #63

The Math Jamboree #63 took place on Saturday, April 16th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #63, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «<u>Color Sudoku</u>» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Ramon Martinez and Antonio Pomares for designing this activity for FUNDAPROMAT.



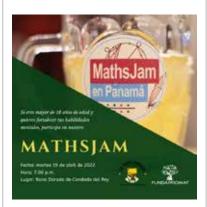








1 **7**7:00 PM 9:00 PM



MathsJam in Panama #3

On Tuesday, April 19th, 2022 from 7 pm until 9 pm, the MathsJam in Panama #3 took place, in which math enthusiasts who are 18 years old and above enjoyed exploring board games and interesting math puzzles in a pleasant environment where they had the opportunity to interact with other like-minded people. This in-person event, which is only for adults, took place in the bar La Rana Dorada of Condado del Rey, Panama City.





21

4:00 PM -5:00 PM



Webinar on Science and Feminism: A Possible Junction?

The Webinar on Science and Feminism: A Possible Junction? took place on Thursday, April 21st, 2022 from 4 pm until 5 pm with Andrea Vera, Academic at the Math Institute of the University of Valparaiso in Chile, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker started the virtual event by indicating that the female population represents approximately 51% of the world population and that only 34% of the researchers in Chile are women (data from 2018). Andrea Vera then explained why it matters that there are few women and what implications this has in the production of knowledge. The speaker also mentioned the book by Cathy O'Neil entitled "Weapons of Math Destruction," the project "Math and Gender Rings" in Chile and the Gender Gap Project.







22

5:00 PM -6:00 PM

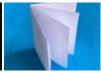


Virtual Origami Class #75

The Virtual Origami Class #75 took place on Friday, April 22nd, 2022 from 5 pm until 6 pm, with the origami artist Matthew Green as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed one sheet of 8.5×11 paper and scissors. Matthew Green then taught how to fold a book, which is a traditional origami model. This origami design is appropriate for 8-year-olds and above.





23

10:00 AM -11:30 AM



Math Jamboree #64

The Math Jamboree #64 took place on Saturday, April 23rd, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #64, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Building» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Romina Busain and Julieta Parravicini for designing this activity for FUNDAPROMAT.







24

11:00 AM -4:00 PM



Math Carnival in the March for Science

On Sunday, April 24th, 2022 from 11 am until 4 pm we ran a Math Carnival in the March for Science full of fun math activities for all ages. This free in-person event for the entire family highlighted the female Panamanian mathematicians Lorena Arias, Yorleny Camarena and Zaida Alonzo and took place at the Biomuseum, Panama City.









26

5:00 PM -6:00 PM



Panel with Inspiring Leaders in STEM

The Panel with Inspiring Leaders in STEM took place on Tuesday, April 26th, 2022 from 5 pm until 6 pm. The special guests of this virtual event were Madelaine Rojas, Astrophysicist and Founder of the Panamanian Spatial Sciences Olympics, Ricardo Chong, Panama Canal Engineer, and Alicia Torres, Veterinarian and President of the Bioethics Committee of the University of Panama.

The Panel with Inspiring Leaders in STEM was aimed at 15-year-olds and above. This virtual event was organized with Glasswing International. You can watch the Facebook Live video by visiting En Casa con Glasswing's Facebook account: @encasaconglasswing.









28

4:00 PM -5:00 PM



Thirty-Third Virtual Encounter with Outstanding Mathematicians

The thirty-third Virtual Encounter with Outstanding Mathematicians took place on Thursday, April 28th, 2022 from 4 pm until 5 pm. Miriam Baez, math communicator and academic of the Actuary School in the Veracruz Anahuac University in Mexico, was our invited speaker. This virtual event was free and open to the general public.

On this thirty-third Encounter, Miriam Baez shared anecdotes of her personal life and her professional journey as a female mathematician. The speaker also presented on "How to Construct a Kirigami Magic Ring?" In this virtual event, the participants learned how to construct a kirigami magic ring by using one 8.5 x 11 sheet of paper, scissors and a pattern that was sent by email to all those who registered.





29

5:00 PM -6:00 PM



Virtual Origami Class #76

The Virtual Origami Class #76 took place on Friday, April 29th, 2022 from 5 pm until 6 pm, with the origami artist Natalia Perez as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed eight paper squares of $10 \, \mathrm{cm} \, \mathrm{x} \, 10 \, \mathrm{cm}$. Natalia Perez then taught how to fold a modular 8-pointed star, which is an origami model created by Robert Neale. This origami design is appropriate for 8-year-olds and above.







APRIL - MAY 2022

30 10:00 AM -11:30 AM



Math Jamboree #65

The Math Jamboree #65 took place on Saturday, April 30th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #65, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Wild Bees» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Camila Espinoza for designing this activity for FUNDAPROMAT.





4 1:00 PM -2:00 PM



Mathemagic Workshop with Glasswing

The Mathemagic Workshop with Glasswing took place on Thursday, May 4th, 2022 from 1 pm until 2 pm. The special guest of this virtual event was the mathemagician Rafa Oliver, math teacher and FUNDAPROMAT volunteer.

In this Mathemagic Workshop with Glasswing, Rafa Oliver performed several mathemagic tricks and described the math secrets behind these tricks. This virtual event was organized with Glasswing International. You can watch the Facebook Live video by visiting En Casa con Glasswing's Facebook account: @encasaconglasswing.



4

5:00 PM -6:00 PM



Fifteenth Math Webinar in English

The fifteenth Math Webinar in English took place on Wednesday, May 4th, 2022 from 5 pm until 6 pm with Annalisa Crannell, Associate Dean of the Faculty and Professor of Mathematics at Franklin & Marshall College, as our invited speaker. This virtual event was free and open to the general public.

In this fifteenth Math Webinar in English, Annalisa Crannell presented on "Drawing Conclusions from Drawing a Square." The speaker explained that perspective art was the spark from which projective geometry grew. Annalisa Crannell pointed out that one of the most surprising results of projective geometry is that every quadrangle is the perspective image of a square. The speaker described applications of this result in computer vision, in photogrammetry, among others, and mentioned the works of art of Albrecht Durer, Hans Holbein the Young and Julian Beever. This virtual event was co-organized by the Mathematical Association of America (MAA).





5 4:00 PM -5:00 PM



Webinar on Functions and Math Golf

The Webinar on Functions and Math Golf took place on Thursday, May 5th, 2022 from 4 pm until 5 pm with Professor Michael Soler from Spain, specialist in virtual reality, service robotics and educational applications for mobile phones, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker presented a multiplatform application based on mental calculation that can be used in the computer and in the mobile phone. Michael Soler explained that in this application called Math Golf, the objective is that the player hits the golf ball into every hole by assigning different values to the variables of a function. The speaker also showed linear, quadratic, rational and exponential functions as examples.



6 1:00 PM -

2:00 PM



Math Outreach Workshop

The Math Outreach Workshop took place on Friday, May 6th, 2022 from 1 pm until 2 pm with Dr. Eduardo Saenz de Cabezon, science communicator and Professor in the Mathematics and Computing Department of the University of La Rioja in Spain, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker started the virtual event by defining the different forms of communication: outreach, popularization, social appropriation, journalism and education. Dr. Eduardo Saenz de Cabezon then explained the importance of knowing your public and how effective the use of humor can be. The speaker also shared several anecdotes on his experience communicating mathematics and mentioned various recommendations on how to convey math content to a target audience.





6

5:00 PM -6:00 PM



Virtual Origami Class #77

The Virtual Origami Class #77 took place on Friday, May 6th, 2022 from 5 pm until 6 pm, with the origami artist Jaciara Grzybowski as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed eight paper squares of $10 \, \mathrm{cm} \times 10 \, \mathrm{cm}$ and glue. Jaciara Grzybowski then taught how to fold a POLLUX snowflake, which is an origami model created by the speaker. This origami design is appropriate for 8-year-olds and above.





7 10:00 AM -11:30 AM



Math Jamboree #66

The Math Jamboree #66 took place on Saturday, May 7th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #66, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Yohaku» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Julieta Parravicini for designing this activity for FUNDAPROMAT.





10 3:00 PM -4:00 PM



Visit to the Bethlemitas Children's Home

On Tuesday, May 10th, 2022 from 3 pm until 4 pm we ran an origami workshop at the Bethlemitas Children's Home in San Felipe, which is a shelter that offers care, medical attention and basic education to the children of Panama City.









12 4:00 PM -5:00 PM

CELEBRACIÓN DEL

POR LAS MUJERES EN MATEMÁTICAS

DIA INTERNACIONAL

Celebration of the International Day for Women in Mathematics 2022

The Celebration of the International Day for Women in Mathematics 2022 took place on Thursday, May 12th, 2022 from 4 pm until 5 pm with Marta Macho-Stadler, Laura Pezzatti and Leslie Jimenez as our invited speakers. Marta Macho-Stadler shared the story of Maryam Mirzakhani, Laura Pezzatti performed several mathemagic tricks and Leslie Jimenez described how we can learn math using images. This virtual event was free and open to the general public.

And why May 12th? Maryam Mirzakhani (1977-2017) became the first woman to receive the Fields Medal in 2014. The Fields Medal is the most prestigious award given by the international math community, equivalent to the Nobel Prize in Mathematics. On May 12th, her birthday, we celebrate the International Day for Women in Mathematics. This celebration began when on July 31st, 2018, the Women's Committee of the Iranian Mathematical Society presented to the participants of the World Meeting for Women in Mathematics a proposal to celebrate women in mathematics on May 12th, and the proposal was approved. May 12th, 2019 was the first official celebration of the International Day for Women in Mathematics. For more information on this celebration, visit the website: https://may12.womeninmaths.org.









13

5:00 PM - 6:00 PM



Virtual Origami Class #78

The Virtual Origami Class #78 took place on Friday, May 13th, 2022 from 5 pm until 6 pm, with the origami artist David Medina as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed one paper square of $15~\rm cm~x~15~cm$ and a pencil. David Medina then taught how to fold an origami pinwheel, which is a traditional origami model. This origami design is appropriate for 8-year-olds and above.





14

10:00 AM -11:30 AM



Math Jamboree #67

The Math Jamboree #67 took place on Saturday, May 14th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #67, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Joining Colors» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Dr. Jeanette Shakalli for designing this activity for FUNDAPROMAT.



15
11:00 AM - 6:00 PM



FUNDAPROMAT Stand at Super Center El Dorado's Book Fair

On Sunday, May 15th, 2022 we were invited by the Super Center El Dorado to have a stand from 11 am until 6 pm at their Book Fair with fun math activities. This free in-person event for the entire family took place at the Central Plaza of the Super Center El Dorado, Panama City.









7:00 AM -4:00 PM

7:00 AM 6:00 PM



Road Trip to Los Santos and Herrera

On Tuesday, May 17th and Wednesday, May 18th, 2022 a FUNDAPROMAT road trip took place from 7 am until 6 pm, in which we talked to directors and teachers from the following academic centers in the provinces of Los Santos and Herrera:

- Integral School of Azuero in Los Santos
- C.A.D.I. Bilingual Academy in Los Santos - Hipolito Perez Tello School in Herrera
- San Juan Bautista School in Herrera
- John F. Kennedy Bilingual Educational Center in Herrera
- Padre Segundo Familiar Cano School in Herrera







- Francisco Castillero School in Los Santos

- Soyuz Bilingual School in Herrera

- Jose Daniel Crespo School in Herrera



4:00 PM -5:00 PM





Thirty-Fourth Virtual Encounter with Outstanding Mathematicians

The thirty-fourth Virtual Encounter with Outstanding Mathematicians took place on Thursday, May 19th, 2022 from 4 pm until 5 pm. Amanda Montejano Cantoral, Professor of Mathematics at the National Autonomous University of Mexico (UNAM), was our invited speaker. This virtual event was free and open to the general public.

On this thirty-fourth Encounter, Amanda Montejano Cantoral shared anecdotes of her personal life and her professional journey as a female mathematician. The speaker also presented on "Coloring Maps." In this virtual event, Amanda Montejano Cantoral explored the question: Is there a minimum number of colors that we can use to color any map so that adjacent regions are in different colors? The speaker also explained that the proof of the four-color theorem took more than one thousand hours of computational time and described the existing controversy on whether a math proof can be computer assisted or not. This presentation was based on the speaker's book in Spanish "Mathematics of Colors." This virtual event was co-organized with the Mexican Mathematical Society (SMM).





5:00 PM -6:00 PM



Virtual Origami Class #79

The Virtual Origami Class #79 took place on Friday, May 20th, 2022 from 5 pm until 6 pm, with the origami artist Deanna Kwan as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed four sheets of 8.5 x 11 paper, a pencil and scissors. Deanna Kwan then taught how to fold Gary's star, which is an origami model created by Sok Song. This origami design is appropriate for 8-year-olds and above.







10:00 AM -11:30 AM



Math Jamboree #68

The Math Jamboree #68 took place on Saturday, May 21st, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #68, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Forward and Backward» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Marleny Vargas for designing this activity for FUNDAPROMAT.

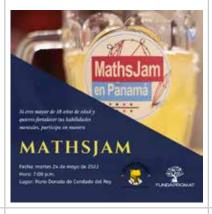






24

7:00 PM - 9:00 PM



MathsJam in Panama #4

On Tuesday, May 24th, 2022 from 7 pm until 9 pm, the MathsJam in Panama #4 took place, in which math enthusiasts who are 18 years old and above enjoyed exploring board games and interesting math puzzles in a pleasant environment where they had the opportunity to interact with other like-minded people. This in-person event, which is only for adults, took place in the bar La Rana Dorada of Condado del Rey, Panama City.



26

4:00 PM -5:00 PM



Webinar on The Secret Life of Mosaics

The Webinar on The Secret Life of Mosaics took place on Thursday, May 26th, 2022 from 4 pm until 5 pm with Dario Alatorre, math communicator in the Math Institute of the National Autonomous University of Mexico (UNAM), as our invited speaker. This virtual event was free and open to the general public.

The invited speaker showed several mosaics with regular polygons and explained the difference between a periodic mosaic and an aperiodic mosaic. Dario Alatorre also mentioned Kepler, Fedorov and Escher and described Robinson's tessellation and Penrose's tessellation. This virtual event was co-organized with the Mexican Mathematical Society (SMM).





27

5:00 PM -6:00 PM



Virtual Origami Class #80

The Virtual Origami Class #80 took place on Friday, May 27th, 2022 from 5 pm until 6 pm, with the origami artist Laura Jimenez as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed one paper square of 12 cm x 12 cm, a black marker and a pencil. Laura Jimenez then taught how to fold a mouse, which is a traditional origami model. This origami design is appropriate for 8-year-olds and above.





28

10:00 AM -11:30 AM



Math Jamboree #69

The Math Jamboree #69 took place on Saturday, May 28th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #69, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «<u>Word Game Reloaded</u>» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Pablo Peralta for designing this activity for FUNDAPROMAT.









MAY - JUNE 2022

1:00 PM 4:00 PM



Math Carnival at Super Center El Dorado

On Sunday, May 29th, 2022 from 1 pm until 4 pm we ran a Math Carnival full of fun math activities for all ages. This free in-person event for the entire family highlighted the female Panamanian mathematicians Eduvigis Rodriguez, Samar Chirinos and Geidy Camargo and took place at the Central Plaza, fountain area of the Super Center El Dorado, Panama City.







10:00 AM -2:00 PM



FUNDAPROMAT Stand at the First Networking Encounter for **Students**

On Tuesday, May 31st, 2022 we were invited by the National Secretariat of Science, Technology and Innovation of Panama (SENACYT) to have a stand from 10 am until 2 pm at the First Networking Encounter for Students with fun math activities. This in-person event took place at the Convention Center of the City of Knowledge, Panama City.







5:00 PM -6:00 PM



Sixteenth Math Webinar in English

The sixteenth Math Webinar in English took place on Wednesday, June 1st, 2022 from 5 pm until 6 pm with Karl Schaffer, dancer/choreographer and mathematician who has co-directed the Dr. Schaffer and Mr. Stern Dance Ensemble with Erik Stern since 1987, as our invited speaker. This virtual event was free and open to the general public.

In this sixteenth Math Webinar in English, Karl Schaffer presented on "Kinesthetic Conundrums." The speaker described rotations of the hands, arms, fingers and feet and showed the dance with paper. Karl Schaffer explained the belt puzzle and finger geometry. The speaker also presented rhythmic alternations and swirling motions and mentioned Scott Kim and Dave Masunaga. This virtual event was co-organized by the Mathematical Association of America (MAA).





Webinar on Math Errors That Aren't Mistakes

The Webinar on Math Errors That Aren't Mistakes took place on Thursday, June 2nd, 2022 from 4 pm until 5 pm with Dr. Eduardo Mancera, Vice President of the Interamerican Committee on Math Education (CIAEM), as our invited speaker. This virtual event was free and open to the general public.

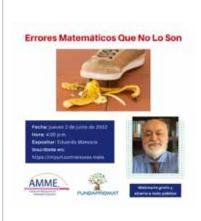
The invited speaker started the virtual event by explaining what is considered a math error. Dr. Eduardo Mancera then showed many examples of math errors that aren't really mistakes but special cases in which a particular relation is satisfied. The speaker also highlighted that by analyzing an error, one can reach really interesting mathematical results. This virtual event was co-organized with the Mexican Association of Educational Mathematics (AMME).





4:00 PM -

5:00 PM





JUNE 2022

5:00 PM -7:00 PM



Virtual Origami Class #81

The Virtual Origami Class #81 took place on Friday, June 3rd, 2022 from 5 pm until 7 pm, with the origami artist Natalia Perez as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed 3 paper squares of $20~\rm cm~x~20~cm$. Natalia Perez then taught how to fold a spinning top, which is an origami model created by Reiko Aso and Taichiro Hasegawa. This origami design is appropriate for 8-year-olds and above.





4

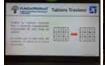
10:00 AM -11:30 AM

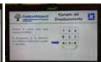


Math Jamboree #70

The Math Jamboree #70 took place on Saturday, June 4th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #70, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «<u>Mischievous Board</u>»in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Rafa Oliver for designing this activity for FUNDAPROMAT.







2:00 PM -5:00 PM



FUNDAPROMAT Stand at the MK Bazaar in the Recreational Park Omar

On Saturday, June 4th, 2022 we were invited by MK Productions to have a stand from 2 pm until 5 pm at the MK Bazaar with fun math activities. This free in-person event for the entire family took place at the Recreational Park Omar, Panama City.









9

4:00 PM -5:00 PM



Webinar on the Mathematics of Infinity

The Webinar on the Mathematics of Infinity took place on Thursday, June 9th, 2022 from 4 pm until 5 pm with Dr. Diego Gonzalez-Moreno, Professor of Mathematics at the Cuajimalpa Metropolitan Autonomous University in Mexico, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker explained what infinity is and presented that there are bigger infinities than others and that there are infinite infinities. Dr. Diego Gonzalez-Moreno described why the infinite set of the real numbers is bigger than the infinite set of the natural numbers. The speaker also mentioned that Cantor's continuum hypothesis was proven to be true and false at the same time, and therefore, there exists Cantorian and non-Cantorian mathematics. This virtual event was co-organized with the Mexican Mathematical Society (SMM).





FUNDAPROMAT

JUNE 2022

10

5:00 PM -6:00 PM



Virtual Origami Class #82

The Virtual Origami Class #82 took place on Friday, June 10th, 2022 from 5 pm until 6 pm, with the origami artist David Medina as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed one paper square of $15 \text{ cm} \times 15 \text{ cm}$, colored pencils and scissors. David Medina then taught how to fold a surprise fish, which is a traditional origami model. This origami design is appropriate for 8-year-olds and above.





11

10:00 AM -11:30 AM



Math Jamboree #71

The Math Jamboree #71 took place on Saturday, June 11th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #71, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Mazes» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Marleny Vargas for designing this activity for FUNDAPROMAT.





11

2:00 PM -5:00 PM











FUNDAPROMAT Stand at Explora

On Saturday, June 11th, 2022 we were invited by the Explora Center of Sciences and Art to have a stand from 2 pm until 5 pm with fun math activities. This free in-person event for the entire family took place at the Explora facilities in Condado del Rey, Panama City.









16

4:00 PM -5:00 PM



Webinar on Math and Architecture

The Webinar on Math and Architecture took place on Thursday, June 16th, 2022 from 4 pm until 5 pm with Antonio Di Teodoro, President of the Ecuadorian Society of Mathematics (SEdeM), as our invited speaker. This virtual event was free and open to the general public.

The invited speaker presented examples of the evolution of architecture throughout history highlighting the renaissance, the gothic and the modern. Antonio Di Teodoro mentioned the architects Gaudi and Zaha Hadid, and the mathematicians Lobachevski and Bolyai. The speaker also described several structures based on a catenary and double curvature. This virtual event was co-organized with the Ecuadorian Society of Mathematics (SEdeM).







JUNE 2022

17

11:00 AM -12:00 PM



Workshop for the Betania Community Board

On Friday, June 17th, 2022 we were invited by the Municipality of Panama to run an origami workshop from 11 am until 12 pm to a group of kids from the Betania Community. This in-person workshop took place at the Super Center El Dorado, Panama City.







17

5:00 PM -6:00 PM



Virtual Origami Class #83

The Virtual Origami Class #83 took place on Friday, June 17th, 2022 from 5 pm until 6 pm, with the origami artist Deanna Kwan as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed two sheets of 8.5×11 paper, a pencil and scissors. Deanna Kwan then taught how to fold a star flower, which is an origami model created by Emily Sue Kwan. This origami design is appropriate for 8-year-olds and above.







18

10:00 AM -11:30 AM



Math Jamboree #72

The Math Jamboree #72 took place on Saturday, June 18th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #72, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Camp» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Julieta Parravicini for designing this activity for FUNDAPROMAT.





19

10:00 AM 1:00 PM



Math Carnival at the Contemporary Art Museum Celebrating Father's Day

On Sunday, June 19th, 2022 from 10 am until 1 pm we ran a Math Carnival celebrating Father's Day full of fun math activities for all ages. This free in-person event for the entire family highlighted the female Panamanian mathematicians Lorena Arias, Keyla Santana and Janeth Martinez and took place at the Contemporary Art Museum, Panama City.



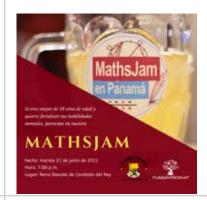




FUNDAPROMAT

JUNE 2022

21 7:00 PM 9:00 PM



MathsJam in Panama #5

On Tuesday, June 21st, 2022 from 7 pm until 9 pm, the MathsJam in Panama #5 took place, in which math enthusiasts who are 18 years old and above enjoyed exploring board games and interesting math puzzles in a pleasant environment where they had the opportunity to interact with other like-minded people. This in-person event, which is only for adults, took place in the bar La Rana Dorada of Condado del Rey, Panama City.





23

4:00 PM -5:00 PM



Thirty-Fifth Virtual Encounter with Outstanding Mathematicians

The thirty-fifth Virtual Encounter with Outstanding Mathematicians took place on Thursday, June 23rd, 2022 from 4 pm until 5 pm. Maria João Resende, Professor of Mathematics at the Fluminense Federal University in Brazil, was our invited speaker. This virtual event was free and open to the general public.

On this thirty-fifth Encounter, Maria João Resende shared anecdotes of her personal life and her professional journey as a female mathematician. The speaker also presented on "Symmetry and the Magic Theorem." In this virtual event, Maria João Resende explained that the paper wall or mosaic is a pattern that repeats periodically without overlapping the figures and without leaving any empty spaces between them. The speaker mentioned the mathematicians Yevgraf Fyodorov, William Thurston and John Conway and highlighted that Thurston proved that there are only 17 types of paper walls but it was Conway who published and popularized this result known as the Magic Theorem. Maria João Resende also invited the participants to find and classify patterns in their city.







23

10:00 AM -4:00 PM

24

10:00 AM 4:00 PM



FUNDAPROMAT Stand at the Boquete Library's Book Fair

On Thursday, June 23rd and Friday, June 24th, 2022 we were invited by the Boquete Library to have a stand from 10 am until 12 pm and from 2 pm until 4 pm at their Book Fair with fun math activities. This free in-person event for the entire family took place at the Boquete Library, Province of Chiriqui.









24

5:00 PM -6:00 PM



Virtual Origami Class #84

The Virtual Origami Class #84 took place on Friday, June 24th, 2022 from 5 pm until 6 pm, with the origami artist Keila Correa de Paula as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed one $15\,\mathrm{cm}\,\mathrm{x}\,15\,\mathrm{cm}$ paper square. Keila Correa de Paula then taught how to fold an elephant mime, which is an origami model created by the speaker. This origami design is appropriate for 8-year-olds and above.







JULY 2022

17

10:00 AM -4:00 PM



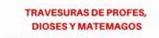
FUNDAPROMAT Stand at the Children's Day Celebration in the Summit Municipal Park

On Sunday, July 17th, 2022 we were invited by the Municipality of Panama to have a stand from 10 am until 12 pm and from 2 pm until 4 pm at their Children's Day Celebration with fun math activities. This free in-person event for the entire family took place at the Summit Municipal Park, Panama City.



21

4:00 PM -5:00 PM



Fecha: jueves 21 de julio de 2022 Hora: 4:00 p.m. Inscribete en: https://timyurt.com/travesuras-matemagos



Webinar on Escapades of Professors, Gods and Mathemagicians

The Webinar on Escapades of Professors, Gods and Mathemagicians took place on Thursday, July 21st, 2022 from 4 pm until 5 pm with Gasde Augusto Hunedy Lopez, Yesenia Villicaña Molina, Alejandro Yustiaza Ulloa Serrano, Richard Nicolas Chacon Serna and Eduardo Lopez Bolaños from the Tamarindo / PiQ2 group as our invited speakers. This virtual event was free and open to the general public.

The Tamarindo / PiQ2 group is a group of diverse scientists who are also playwrights and with theater, they have found multiple ways to communicate and transmit their passion for mathematics. This theater play was created especially for FUNDAPROMAT in which four gods help a professor discover how fantastic and fun mathematics is through a trip to pre-Hispanic America. The Tamarindo / PiQ2 group surprised the audience with their acts full of humor and incredible mathemagic tricks.









22

5:00 PM -6:00 PM



Virtual Origami Class #85

The Virtual Origami Class #85 took place on Friday, July 22nd, 2022 from 5 pm until 6 pm, with the origami artist Noelia Avila as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed one 15 cm x 15 cm paper square and scissors. Noelia Avila then taught how to fold Kazaguruma (Windmill), which is an origami model created by Mimi Nohara. This origami design is appropriate for 8-year-olds and above.





23

10:00 AM -11:30 AM



Math Jamboree #73

The Math Jamboree #73 took place on Saturday, July 23rd, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #73, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Party Cakes» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Sergio Mendoza and Jeanette Shakalli for designing this activity for FUNDAPROMAT.







FUNDAPROM

JULY 2022

24

10:00 AM -1:00 PM



Math Carnival at the Metropolitan Natural Park

On Sunday, July 24th, 2022 from 10 am until 1 pm we ran a Math Carnival full of fun math activities for all ages. This free in-person event for the entire family highlighted the female Panamanian mathematicians Yorleny Camarena, Zaida Alonzo and Yadira Saldaña and took place at the Elena Guardia de Lombardo Room of the Metropolitan Natural Park, Panama City.









28

4:00 PM -5:00 PM



Thirty-Sixth Virtual Encounter with Outstanding Mathematicians

The thirty-sixth Virtual Encounter with Outstanding Mathematicians took place on Thursday, July 28th, 2022 from 4 pm until 5 pm. Adriana Hansberg, Researcher at the National Autonomous University of Mexico (UNAM), was our invited speaker. This virtual event was free and open to the general public.

On this thirty-sixth Encounter, Adriana Hansberg shared anecdotes of her personal life and her professional journey as a female mathematician. The speaker also presented on "Colored Universes and Curious Patterns." In this virtual event, Adriana Hansberg showed how three curious patterns are related to Ramsey's Theorem, Van der Waerden's Theorem and Schur's Theorem. The first pattern has to do with the number of people who know each other in a party. The second pattern involves configurations in which three dominoes of the same color are equidistant. The third pattern is related to playing cards of two colors and the sum of the cards with the same color. This virtual event was co-organized with the Mexican Mathematical Society (SMM).









29

5:00 PM -6:00 PM



Virtual Origami Class #86

The Virtual Origami Class #86 took place on Friday, July 29th, 2022 from 5 pm until 6 pm, with the origami artist Matthew Green as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed eight $10~\rm cm~x~10~cm$ paper squares. Matthew Green then taught how to fold Mandala Laus, which is an origami model created by the speaker. This origami design is appropriate for 8-year-olds and above.





30

10:00 AM -11:30 AM



Math Jamboree #74

The Math Jamboree #74 took place on Saturday, July 30th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #74, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity calleda «<u>Multicolor Three in a Row</u>» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Rafa Oliver and Jeanette Shakalli for designing this activity for FUNDAPROMAT.







AUGUST 2022

10

4:00 PM -5:30 PM



Seventeenth Math Webinar in English

The seventeenth Math Webinar in English took place on Wednesday, August 10th, 2022 from 4 pm until 5:30 pm with David Hall, actor, STEM presenter and executive coach, as our invited speaker. This virtual event was free and open to the general public.

In this seventeenth Math Webinar in English, David Hall presented on "Mathmagics!" The speaker explained exponential growth, right angles, the number pi, infinity, among other math concepts, by using magic. David Hall also mentioned Ada Lovelace, Florence Nightingale, John Napier, Katherine Johnson and other mathematicians who made an impact in history. This virtual event was co-organized by the Mathematical Association of America (MAA).









11

4:00 PM -5:00 PM



Webinar on The ABC of Math Communication

The Webinar on The ABC of Math Communication took place on Thursday, August 11th, 2022 from 4 pm until 5 pm with Paloma Zubieta, scientific communicator at the Math Institute of the National Autonomous University of Mexico (UNAM), as our invited speaker. This virtual event was free and open to the general public.

The speaker explained the three steps to generate a science outreach product: a. Reflective practice, b. Execution, and c. Evaluation. Paloma Zubieta highlighted that reflective practice involves: 1. Define objective, 2. Choose key message, 3. Define public, 4. Define means of outreach, 5. Select material, 6. Include engaging element, 7. Define informative genre, 8. Define communication model, 9. Select methodology and evaluation tools, and 10. Include STEM and equality focus. The speaker also shared several specific recommendations for math outreach.







12

5:00 PM -6:00 PM



Virtual Origami Class #87

The Virtual Origami Class #87 took place on Friday, August 12th, 2022 from 5 pm until 6 pm, with the origami artist Aronny Pivaral (who replaced David Medina, who had a setback) as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed one $15~\mathrm{cm} \times 15~\mathrm{cm}$ paper square and colored pencils. Aronny Pivaral then taught how to fold a banana, which is an origami model created by Javier Caboblanco. This origami design is appropriate for 8-year-olds and above.





13

10:00 AM -11:30 AM



Math Jamboree #75

The Math Jamboree #75 took place on Saturday, August 13th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #75, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «<u>Balance Scales</u>» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Ramon Martinez for designing this activity for FUNDAPROMAT.







AUGUST 2022

18

10:00 AM -12:00 PM



FUNDAPROMAT Table in the City of Knowledge Stand at the International Book Fair

On Thursday, August 18th, 2022 we were invited by the City of Knowledge Foundation to have a table of fun math activities from 10 am until 12 pm in their stand at the International Book Fair. This in-person event for the entire family took place at the Megapolis Convention Center, Panama City.







18

4:00 PM -5:00 PM



Webinar on How Do Prime Numbers Protect Our Information?

The Webinar on How Do Prime Numbers Protect Our Information? took place on Thursday, August 18th, 2022 from 4 pm until 5 pm with Beatriz Londoño, leader of the Science and Technology For Everyone Initiative (SciTechXE), as our invited speaker. This virtual event was free and open to the general public.

The speaker described the RSA algorithm called liked that because of Rivest, Shamir and Adleman, which is an algorithm of asymmetric encryption and public key. Beatriz Londoño then explained what modular arithmetic is, how the decomposition into prime factors works and what does Euclides' algorithm state. The speaker also showed an example of how to encode, encrypt and decrypt messages assuming that our vocabulary is limited to 9 words.







19

5:00 PM -6:00 PM



Virtual Origami Class #88

The Virtual Origami Class #88 took place on Friday, August 19th, 2022 from 5 pm until 6 pm, with the origami artist Laura Jimenez as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed one $12 \text{ cm} \times 12 \text{ cm}$ paper square and a black marker. Laura Jimenez then taught how to fold a ladybug, which is a traditional origami model. This origami design is appropriate for 8-year-olds and above.





20

10:00 AM -11:30 AM



Math Jamboree #76

The Math Jamboree #76 took place on Saturday, August 20th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #76, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Spinning Coins» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Sydney Weaver and Rafa Oliver for designing this activity for FUNDAPROMAT.







AUGUST 2022

20

6:00 PM - 7:00 PM



Origami Workshop at the International Book Fair

On Saturday, August 20th, 2022 we were invited by the Panamanian Book Chamber (CAPALI) to run an origami workshop from 6 pm until 7 pm at the International Book Fair. This in-person workshop took place at the Megapolis Convention Center, Panama City.



21

2:00 PM -3:00 PM



Rubik's Cube Workshop at the International Book Fair

On Sunday, August 21st, 2022 we were invited by the Panamanian Book Chamber (CAPALI) to run a Rubik's Cube workshop from 2 pm until 3 pm at the International Book Fair. This in-person workshop took place at the Megapolis Convention Center, Panama City.

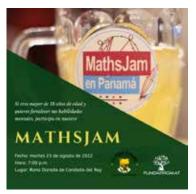






23

7:00 PM -9:00 PM



MathsJam in Panama #6

On Tuesday, August 23rd, 2022 from 7 pm until 9 pm, the MathsJam in Panama #6 took place, in which math enthusiasts who are 18 years old and above enjoyed exploring board games and interesting math puzzles in a pleasant environment where they had the opportunity to interact with other like-minded people. This in-person event, which is only for adults, took place in the bar La Rana Dorada of Condado del Rey, Panama City.





Thirty-Seventh Virtual Encounter with Outstanding Mathematicians

The thirty-seventh Virtual Encounter with Outstanding Mathematicians took place on Thursday, August 25th, 2022 from 4 pm until 5 pm. Diana Quintana Sanchez, Professor of Mathematics at the National University of Piura in Peru, was our invited speaker. This virtual event was free and open to the general public

On this thirty-seventh Encounter, Diana Quintana Sanchez shared anecdotes of her personal life and her professional journey as a female mathematician. The speaker also presented on "String Art and Mathematics." In this virtual event, Diana Quintana Sanchez described the materials required to make string art: trupan wood of 12 mm of thickness and 25 cm of length and width, colored embroidery threads, corduroy cloth in black to cover the trupan, silicone or engraver to cover the trupan with the cloth, wood nails of 1 inch, one sheet of paper, a pencil, a ruler and a compass. The speaker explained how to draw with ruler and compass the mold for our string art, how to prepare the work board and finally how to embroider it following some simple steps that use mathematics. This virtual event was co-organized with the Peruvian Association on Math Education Research (APINEMA).













AUGUST - SEPTEMBER 2022

26

5:00 PM -6:00 PM



Virtual Origami Class #89

The Virtual Origami Class #89 took place on Friday, August 26th, 2022 from 5 pm until 6 pm, with the origami artist Natalia Perez as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed one 20 cm x 20 cm paper square. Natalia Perez then taught how to fold a Masu Box with a window, which is an origami model created by Tomoko Fuse. This origami design is appropriate for 8-year-olds and above.





27

10:00 AM -11:30 AM



Math Jamboree #77

The Math Jamboree #77 took place on Saturday, August 27th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #77, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «<u>Connecting Dots</u>» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Jeanette Shakalli and Rafa Oliver for designing this activity for FUNDAPROMAT.





28

2:00 PM -5:00 PM



Math Carnival at the Panama Canal Museum

On Sunday, August 28th, 2022 from 2 pm until 5 pm we ran a Math Carnival full of fun math activities for all ages. This free in-person event for the entire family highlighted the female Panamanian mathematicians Daysi Jackson, Iveth Martinez and Keyla Santana and took place at the Panama Canal Museum, Panama City.







1

4:00 PM -5:00 PM



Webinar on Math Reflections, from the Kitchen to the Telescopes

The Webinar on Math Reflections, from the Kitchen to the Telescopes, took place on Thursday, September 1st, 2022 from 4 pm until 5 pm with Alberto Mercado-Saucedo, Professor of Mathematics at the Federico Santa Maria Technical University in Chile, as our invited speaker. This virtual event was free and open to the general public.

The speaker explained how light is transmitted, how a mirror works and how light rays are reflected off flat and curved surfaces. Alberto Mercado-Saucedo then described what is the shortest distance an ant has to walk on the surface of a cube to reach from one extreme to the other and presented how this problem is related to the question: how long does a mirror have to be so that you can see your full body? The speaker also shared the applications of these topics in daily life: in parabolic antennas, in telescopes, in math kitchens, among others.









SEPTEMBER 2022

2 5:00 PM -6:00 PM



Virtual Origami Class #90

The Virtual Origami Class #90 took place on Friday, September 2nd, 2022 from 5 pm until 6 pm, with the origami artist Deanna Kwan as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed one sheet of 8.5×11 paper, scissors, a pencil and a paper clip. Deanna Kwan then taught how to fold Honey Bunny, which is an origami model created by Gay Merrill Gross. This origami design is appropriate for 8-year-olds and above.





3 10:00 AM -11:30 AM



Math Jamboree #78

The Math Jamboree #78 took place on Saturday, September 3rd, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #78, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called <u>«Entrapping Colors»</u> in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Camila Espinoza for designing this activity for FUNDAPROMAT.





5:00 PM - 6:00 PM



Eighteenth Math Webinar in English

The eighteenth Math Webinar in English took place on Wednesday, September 7th, 2022 from 5 pm until 6 pm with Yana Mohanty, Founder and CEO at Imathgination LLC, as our invited speaker. This virtual event was free and open to the general public.

In this eighteenth Math Webinar in English, Yana Mohanty presented on "Dickens, Airplane Wings, and Other Stops in the Journey of a Flexagon." The speaker introduced the tri-tetraflexagon and described how two tri-tetraflexagons can be attached to make a magic wallet. Yana Mohanty then explained how a Jacob's Ladder is a chain of several magic wallets and showed various references to this ladder in art and in literature. This virtual event was co-organized by the Mathematical Association of America (MAA).







8

4:00 PM -5:00 PM



Webinar on Applications of the Pythagorean Theorem in Daily Life

The Webinar on Applications of the Pythagorean Theorem in Daily Life took place on Thursday, September 8th, 2022 from 4 pm until 5 pm with Carmen Martinez Adame, Professor of Mathematics at the National Autonomous University of Mexico (UNAM), as our invited speaker. This virtual event was free and open to the general public.

The speaker explained what the Pythagorean Theorem is and how this result came to be. Carmen Martinez Adame then described how the Pythagorean Theorem is used in architecture, in construction, in the house, in topography, in ballistics, in navigation, in seismography, in art, among other applications. The speaker also shared how this theorem helps us calculate distances, like for example: how far away is the horizon when we are in the beach? This virtual event was co-organized with the Mexican Mathematical Society (SMM).









SEPTEMBER 2022

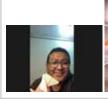
9 5:00 PM -6:00 PM



Virtual Origami Class #91

The Virtual Origami Class #91 took place on Friday, September 9th, 2022 from 5 pm until 6 pm, with the origami artist David Medina as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed two 15 cm x 15 cm paper squares. David Medina then taught how to fold a puppy, which is a traditional origami model. This origami design is appropriate for 8-year-olds and above.





10:00 AM -11:30 AM



Math Jamboree #79

The Math Jamboree #79 took place on Saturday, September 10th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #79, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Dominoes» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We t





15

4:00 PM -5:00 PM



Webinar on How real are the complex numbers?

The Webinar on How real are the complex numbers? took place on Thursday, September 15th, 2022 from 4 pm until 5 pm with Anita Rojas, Professor of Mathematics at the University of Chile, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker started the virtual event by explaining what we know about the real numbers. Anita Rojas then presented the story of how the complex numbers were discovered. The speaker shared several applications of the complex numbers in physics, chemistry, engineering, dynamics and geometry. Anita Rojas also described what fractals, the Julia set and Riemann surfaces are and highlighted Maryam Mirzakhani's work.







16

5:00 PM -6:00 PM



Virtual Origami Class #92

The Virtual Origami Class #92 took place on Friday, September 16th, 2022 from 5 pm until 6 pm, with the origami artist Laura Jimenez as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed one $18 \text{ cm} \times 18 \text{ cm}$ paper square, a pencil, glue and a paper clip. Laura Jimenez then taught how to fold a stingray, which is an origami model created by James W. Peake. This origami design is appropriate for 8-year-olds and above.







SEPTEMBER 2022

17

10:00 AM -11:30 AM



Math Jamboree #80

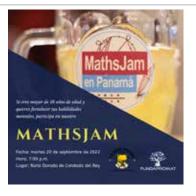
The Math Jamboree #80 took place on Saturday, September 17th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #80, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «The Legacy of the Mischievous Board» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Rafa Oliver for designing this activity for FUNDAPROMAT.



20

7:00 PM -9:00 PM



MathsJam in Panama #7

On Tuesday, September 20th, 2022 from 7 pm until 9 pm, the MathsJam in Panama #7 took place, in which math enthusiasts who are 18 years old and above enjoyed exploring board games and interesting math puzzles in a pleasant environment where they had the opportunity to interact with other like-minded people. This in-person event, which is only for adults, took place in the bar La Rana Dorada of Condado del Rey, Panama City.







22

4:00 PM -5:00 PM



Thirty-Eighth Virtual Encounter with Outstanding Mathematicians

The thirty-eighth Virtual Encounter with Outstanding Mathematicians took place on Thursday, September 22nd, 2022 from 4 pm until 5 pm. Angelica Trejo, math teacher in basic and intermediate levels in Mexico, was our invited speaker. This virtual event was free and open to the general public.

On this thirty-eighth Encounter, Angelica Trejo shared anecdotes of her personal life and her professional journey as a female mathematician. The speaker also presented on "The Golden Ratio and the Fibonacci Sequence." In this virtual event, Angelica Trejo explained what the golden ratio is and made an experiment that used paper, a pencil, a tape measure and a calculator. The speaker then defined the Fibonacci sequence and described its relation with the golden ratio. Angelica Trejo also showed examples of the Fibonacci sequence in the human body, in nature, in art, in architecture, in graphic design, among others.





23

5:00 PM -6:00 PM



Virtual Origami Class #93

The Virtual Origami Class #93 took place on Friday, September 23rd, 2022 from 5 pm until 6 pm, with the origami artist Matthew Green as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed one $15 \, \mathrm{cm} \, \mathrm{x} \, 15 \, \mathrm{cm}$ paper square. Matthew Green then taught how to fold the Star of David, which is a traditional origami model. This origami design is appropriate for 8-year-olds and above.







SEPTEMBER 2022

24

10:00 AM -11:30 AM



Math Jamboree #81

The Math Jamboree #81 took place on Saturday, September 24th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #81, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «The Maze Runner» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Rafa Oliver for designing this activity for FUNDAPROMAT.





25

2:00 PM -5:00 PM



Math Carnival at Town Center Costa del Este

On Sunday, September 25th, 2022 from 2 pm until 5 pm we ran a Math Carnival full of fun math activities for all ages. This free in-person event for the entire family highlighted female Panamanian mathematicians Janeth Martinez, Yesenia Quintero and Lorena Arias and took place at Town Center Costa del Este, Las Perlas Tower, Level M3, in front of the Food Court, Panama City.









29

4:00 PM -6:00 PM



GeoGebra Workshop

The GeoGebra Workshop took place on Thursday, September 29th, 2022 from 4 pm until 6 pm with Yessenia Hernandez from Mexico, who holds a Bachelor's degree in Applied Mathematics, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker started the virtual event by explaining that GeoGebra is a dynamic mathematical software with applications in geometry, algebra, spreadsheets, graphs and statistics. Yessenia Hernandez then described the basic tools of GeoGebra Classroom and GeoGebra Notes. The speaker also shared three activities for the participants of the workshop to practice the use of this software.







30

9:00 AM -12:00 PM



FUNDAPROMAT Stand at the XVI Municipal Book, Art and Culture Fair

On Friday, September 30th, 2022 we were invited by the Municipality of Panama to have a stand from 9 am until 12 pm at the XVI Municipal Book, Art and Culture Fair with fun math activities. This free in-person event for the entire family took place at the Hatillo Building, Ground Floor, Municipality of Panama, Panama City.











SEPTEMBER - OCTOBER 2022

30

5:00 PM -6:00 PM



Virtual Origami Class #94

The Virtual Origami Class #94 took place on Friday, September 30th, 2022 from 5 pm until 6 pm, with the origami artist Natalia Perez as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed one 15 cm x 15 cm paper square. Natalia Perez then taught how to fold a box-envelope, which is a traditional origami model. This origami design is appropriate for 8-year-olds and above





10:00 AM -11:30 AM



Math Jamboree #82

The Math Jamboree #82 took place on Saturday, October 1st, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

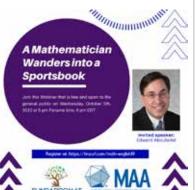
In this Math Jamboree #82, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Lego Towers» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Camila Espinoza for designing this activity for FUNDAPROMAT.





5

5:00 PM -6:00 PM



Nineteenth Math Webinar in English

The nineteenth Math Webinar in English took place on Wednesday, October 5th, 2022 from 5 pm until 6 pm with Edward Aboufadel, Professor of Mathematics at Grand Valley State University and Elected Fellow of the American Association for the Advancement of Science (AAAS), as our invited speaker. This virtual event was free and open to the general public.

In this nineteenth Math Webinar in English, Edward Aboufadel presented on "A Mathematician Wanders into a Sportsbook." The speaker started the virtual event by explaining how sports bets work and showed several examples with different scenarios. Edward Aboufadel described how we can use mathematics to study the question of guaranteed payouts from free bets that are offered. This virtual event was co-organized by the Mathematical Association of America (MAA).







6

4:00 PM -5:00 PM



Webinar on Mathemagics: A Journey from Outreach to Research

The Webinar on Mathemagics: A Journey from Outreach to Research took place on Thursday, October 6th, 2022 from 4 pm until 5 pm with the mathemagician Sergio Fernandez from Colombia as our invited speaker. This virtual event was free and open to the general public.

The invited speaker surprised the audience with three magic tricks with playing cards. Sergio Fernandez explained the concept of a permutation and described bicolored permutations and signed permutations. The speaker also defined Hummer's Principle and shared how magic and outreach guided him towards math research.









5:00 PM -6:00 PM



Virtual Origami Class #95

The Virtual Origami Class #95 took place on Friday, October 7th, 2022 from 5 pm until 6 pm, with the origami artist Deanna Kwan as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed two sheets of 8.5×11 paper, a pencil, scissors and a marker. Deanna Kwan then taught how to fold Fish and Stand, which is an origami model created by Toyoaki Kawai. This origami design is appropriate for 8-year-olds and above.





8 10:00 AM -11:30 AM



Math Jamboree #83

The Math Jamboree #83 took place on Saturday, October 8th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #83, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called <u>«The Hidden Treasure</u>» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Dr. Jeanette Shakalli for designing this activity for FUNDAPROMAT.







13 4:00 PM -5:00 PM



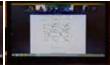
We binar on An opportune calculation, rhyme and mathematics, playing with grammar, like: $1\times1=1$

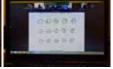
The Webinar on An opportune calculation, rhyme and mathematics, playing with grammar, like: $1\times1=1$ took place on Thursday, October 13th, 2022 from 4 pm until 5 pm with Pedro Morales-Almazan, Professor of Mathematics at the University of California in Santa Cruz, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker presented several examples of how mathematics is connected to poetry through description, content and structure. Pedro Morales-Almazan shared poems of Violeta Parra, Juan Ramon Jimenez, Borges, Jorge Eielson and Joan Brossa. The speaker also described the structure of the sestinas and related them with permutations and diagrams.









14

5:00 PM -6:00 PM



Virtual Origami Class #96

The Virtual Origami Class #96 took place on Friday, October 14th, 2022 from 5 pm until 6 pm, with the origami artist Laura Jimenez as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed one 20 cm x 20 cm paper square and colored pencils or markers. Laura Jimenez then taught how to fold a skull, which is an origami model from the YouTube Channel Hello Origami. This origami design is appropriate for 8-year-olds and above.







15

10:00 AM -11:30 AM



Math Jamboree #84

The Math Jamboree #84 took place on Saturday, October 15th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #84, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called "Discovering Patterns" in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Dr. Jeanette Shakalli for designing this activity for FUNDAPROMAT.





15 3:00 PM -

4:00 PM



Origami Workshop at the Mola Museum

On Saturday, October 15th, 2022 we were invited by the Alberto Motta Foundation to run an origami workshop from 3 pm until 4 pm aimed at 8 to 12 year old kids. This in-person workshop took place at the Mola Museum in Casco Antiguo, Panama City.



17

7:00 PM -9:00 PM



Theatrical Play "The Joy of Mathematics"

On Monday, October 17th, 2022 the theatrical play "The Joy of Mathematics" took place from 7 pm until 9 pm. Script and direction by Jorge Garcia with the performances of Yamiselle Diaz, Kathleen Moreno, Sammy Ibarra and Jorge Garcia. This comedy for the entire family took place at the ABA Theater, Panama City. The funds raised benefited the FUNDAPROMAT projects.



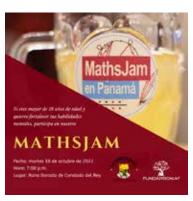






18

7:00 PM -9:00 PM



MathsJam in Panama #8

On Tuesday, October 18th, 2022 from 7 pm until 9 pm, the MathsJam in Panama #8 took place, in which math enthusiasts who are 18 years old and above enjoyed exploring board games and interesting math puzzles in a pleasant environment where they had the opportunity to interact with other like-minded people. This in-person event, which is only for adults, took place in the bar La Rana Dorada of Condado del Rey, Panama City.





19

5:00 PM -6:00 PM



Eleventh Rubik's Cube Webinar

The eleventh Rubik's Cube Webinar took place on Wednesday, October 19th, 2022 from 5 pm until 6 pm, with the professional speedcuber Sydney Weaver from the United States as our invited speaker. This virtual event was free and open to the general public.

On this eleventh Webinar, the speaker defined the notation that speedcubers use. Sydney Weaver then explained step by step the algorithms that make up the beginners method to solve the Rubik's Cube and shared some recommendations on how to improve the time of resolution of this math puzzle.









20 10:00 AM -12:00 PM



FUNDAPROMAT Stand at the V Congress of the UTP Civil Engineering School

On Thursday, October 20th, 2022 we were invited by the Technological University of Panama (UTP) to have a stand from 10 am until 12 pm at the V Congress of the UTP Civil Engineering School with fun math activities. This in-person event took place at the lobby of Building #1 of the Technological University of Panama (UTP), Panama City.









21

5:00 PM -6:00 PM



Virtual Origami Class #97

The Virtual Origami Class #97 took place on Friday, October 21st, 2022 from 5 pm until 6 pm, with the origami artist Noelia Avila as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed three $15~\rm cm~x~15~cm$ paper squares. Noelia Avila then taught how to fold a rotating tetrahedron, which is an origami model created by Tomoko Fuse. This origami design is appropriate for 8-year-olds and above.





22

10:00 AM -11:30 AM



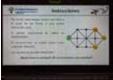
Math Jamboree #85

The Math Jamboree #85 took place on Saturday, October 22nd, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #85, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Roadrunner» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Camila Espinoza for designing this activity for FUNDAPROMAT.









23

2:00 PM -5:00 PM



Math Carnival at Atrio Costa del Este

On Sunday, October 23rd, 2022 from 2 pm until 5 pm we ran a Math Carnival full of fun math activities for all ages. This free in-person event for the entire family highlighted the female Panamanian mathematicians Yorleny Camarena, Daysi Jackson, Cristina Gonzalez and Yadira Saldaña and took place at Atrio Costa del Este, Central Plaza, First Floor, Panama City.









25

7:00 AM -5:00 PM

7:00 AM -4:00 PM



Plane Trip to Chiriqui

On Tuesday, October 25th and Wednesday, October 26th, 2022 a FUNDAPROMAT plane trip took place from 7 am until 4 pm, in which we talked to directors and teachers from the following academic centers in the province of Chiriqui:

- Octavio Lopez Pascal Los Naranjos School in Boquete
- Josefa Montero de Vasquez Educational Center in Boquete El Buen Pastor Bilingual School in Boquete
- Benigno Tomas Argote High School in Boquete
- Beatriz Miranda de Cabal School in Dolega - Francisco Morazan School in David
- American School in David

- Pio XII School in Boquete

- Alto Boquete School in Boquete
- Pablo Emilio Corsen School in David
- David Institute in David
- La Esperanza School in David

We also visited the Autonomous University of Chiriqui (UNACHI) in David.









4:00 PM -5:00 PM



Thirty-Ninth Virtual Encounter with Outstanding Mathematicians

The thirty-ninth Virtual Encounter with Outstanding Mathematicians took place on Thursday, October 27th, 2022 from 4 pm until 5 pm. Margot Salas, Professor of Mathematics at the Sergio Arboleda University in Colombia, was our invited speaker. This virtual event was free and open to the general public.

On this thirty-ninth Encounter, Margot Salas shared anecdotes of her personal life and her professional journey as a female mathematician. The speaker also presented on "Are there always two points on the surface of the Earth, in opposite sides, with the same temperature?" In this virtual event, Margot Salas explained what topology is and defined what two points that are diametrically opposite means. The speaker described the Intermediate Value Theorem, the Borsuk-Ulam Theorem, the Ham Sandwich Theorem and the Stolen Necklace Theorem. Margot Salas then briefly shared the story of the mathematicians Stanislaw Ulam and Karol Borsuk.







5:00 PM -6:00 PM



Virtual Origami Class #98

The Virtual Origami Class #98 took place on Friday, October 28th, 2022 from 5 pm until 6 pm, with the origami artist David Medina as our invited speaker. This virtual event was free and open to the general

For this class, participants needed one 15 cm x 15 cm paper square. David Medina then taught how to fold a witch hat, which is a traditional origami model. David Medina also taught how to fold a Halloween pumpkin by using one 15 cm x 15 cm paper square. These origami designs are appropriate for 8-yearolds and above.









OCTOBER - NOVEMBER 2022

29 10:00 AM -

11:30 AM



Math Jamboree #86

The Math Jamboree #86 took place on Saturday, October 29th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #86, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «The Game of 24» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Romina Busain and Julieta Parravicini for designing this activity for FUNDAPROMAT.





2 5:00 PM -6:00 PM



Twentieth Math Webinar in English

The twentieth Math Webinar in English took place on Wednesday, November 2nd, 2022 from 5 pm until 6 pm with Michaela Epstein, Founder of the Maths Teacher Circles Australia, as our invited speaker. This virtual event was free and open to the general public.

In this twentieth Math Webinar in English, Michaela Epstein presented on "The Power of Estimation." The speaker defined estimation as an educated guess about something we don't know, using information we have. Michaela Esptein then explained that estimation is a skill that you can develop, needs a meaningful context and helps to build understanding, sense-making, curiosity and confidence. The speaker also shared several recommendations for teachers: regularly encourage estimation, refer back to estimates and stay non-judgmental. Michaela Epstein invited the audience to visit the website mathsteacher-circles.org/fundapromat for more information on the Maths Teacher Circles Australia. This virtual event was co-organized by the Mathematical Association of America (MAA).







3 4:00 PM -5:00 PM



Webinar on Images, Colors and Matrices

The Webinar on Images, Colors and Matrices took place on Thursday, November 3rd, 2022 from 4 pm until 5 pm with Malena Español, Assistant Professor of Mathematics at Arizona State University, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker started the virtual event by explaining that we use images and videos, for example, in astronomy, in biology, in medical diagnostics and in autonomous vehicles. Malena Español then described how images and videos are saved in a computer and how this is related to matrices. The speaker also shared what symmetric matrices, Toeplitz matrices and circulating matrices are and highlighted the work done by Ingrid Daubechies to save a lot of memory.







4 5:00 PM -6:00 PM



Virtual Origami Class #99

The Virtual Origami Class #99 took place on Friday, November 4th, 2022 from 5 pm until 6 pm, with the origami artist Deanna Kwan as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed three sheets of 8.5×11 paper, a pencil, scissors and two paper clips. Deanna Kwan then taught how to fold Triknity, which is an origami model created by Robert Foord. This origami design is appropriate for 8-year-olds and above.









NOVEMBER 2022

10:00 AM -11:30 AM



Acertijos con Serpientes

de Números

Math Jamboree #87

The Math Jamboree #87 took place on Saturday, November 5th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #87, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Dinosaurs» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Julieta Parravicini for designing this activity for FUNDAPROMAT.







Webinar on Riddles with Number Snakes

The Webinar on Riddles with Number Snakes took place on Thursday, November 10th, 2022 from 4 pm until 5 pm with Rodolfo Kurchan, designer of riddles and mechanical puzzles from Argentina, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker presented several riddles with number snakes, like for example, what is the longest snake that you can find in a 5 x 5 grid following the sequence 1234512... without repeating the numbers in rows and columns. Rodolfo Kurchan encouraged the participants to solve various puzzles with number snakes and also recommended exploring the site http://snake.puzzlefun.online.







5:00 PM -6:00 PM



Virtual Origami Class #100

The Virtual Origami Class #100 took place on Friday, November 11th, 2022 from 5 pm until 6 pm, with the origami artist David Medina as our invited speaker. This virtual event was free and open to the gener-

For this class, participants needed two 15 cm x 15 cm paper squares and a pencil. David Medina then taught how to fold an ice cream cone, which is a traditional origami model. This origami design is appropriate for 8-year-olds and above.





10:00 AM -11:30 AM



Math Jamboree #88

The Math Jamboree #88 took place on Saturday, November 12th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #88, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «The Mill Game» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Alma Gomez for designing this activity for FUNDAPROMAT.



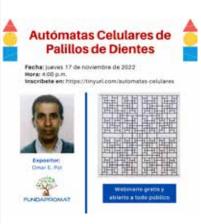




NOVEMBER 2022

17

4:00 PM -5:00 PM



Webinar on Cellular Automata of Toothpicks

The Webinar on Celullar Automata of Toothpicks took place on Thursday, November 17th, 2022 from 4 pm until 5 pm with Omar E. Pol, Associate Editor of the Online Encyclopedia of Whole Number Sequences, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker explained that cellular automata are like animated drawings that start for example with a simple small square, or with a line, on a grid sheet and keep on growing following a very simple rule. Omar E. Pol then described that cellular automata of toothpicks differ from classical cellular automata in that they are formed by lines instead of cells and that as they grow, they form different polygons and also geometric figures based on quarters of circles. Omar E. Pol also showed multiple examples of cellular automata formed with toothpicks that create astonishing artistic designs and invited the participants to continue exploring them in the link <a href="https://example.com/osciety/assessions/basessions/se





18
10:00 AM -



Workshop for the Children's Hospital

On Friday, November 18th, 2022 we were invited by the Volunteer Corps of Doctor Jose Renan Esquivel Children's Hospital to run an origami workshop from 10 am until 11 am to a group of kids, patients of the Hospital. This in-person workshop took place at the Doctor Jose Renan Esquivel Children's Hospital, Panama City.





18
5:00 PM

6:00 PM



Virtual Origami Class #101

The Virtual Origami Class #101 took place on Friday, November 18th, 2022 from 5 pm until 6 pm, with the origami artist Matthew Green as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed three 15 cm x 15 cm paper squares. Matthew Green then taught how to fold a pagoda, which is a traditional origami model. This origami design is appropriate for 8-year-olds and above





19
10:00 AM 11:30 AM



Math Jamboree #89

The Math Jamboree #89 took place on Saturday, November 19th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #89, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Figures and Colors» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Ramon Martinez for designing this activity for FUNDAPROMAT.







NOVEMBER 2022

19

11:00 AM -5:00 PM



Toy Drive for the Kids of Darien

On Saturday, November 19th, 2022 we organized a toy drive for the kids of Darien. The toys were received from 11 am until 5 pm at the FUNDAPROMAT office in Building 181 of the City of Knowledge and afterwards, were donated to the Sisters of the Maria Rafols Residency to be delivered to the children living in the Province of Darien.



23

11:00 AM -12:00 PM



Mathematical Circus in Veraguas

On Wednesday, November 23rd, 2022 the keynote speech "Mathematical Circus" took place from 11 am until 12 pm at the Auditorium of the Regional University Center in Veraguas of the University of Panama, Santiago City, Province of Veraguas. This free in-person event for the entire family was given by our international invited speaker Tiago Hirth from Portugal.









24

11:00 AM -12:00 PM



Mathematical Circus in Darien

On Thursday, November 24th, 2022 the keynote speech "Mathematical Circus" took place from 11 am until 12 pm at the Bellagio Restaurant in Meteti, Province of Darien. This free in-person event for the entire family was given by our international invited speaker Tiago Hirth from Portugal.









25

11:00 AM -12:00 PM



Mathematical Circus in Panama

On Friday, November 25th, 2022 the keynote speech "Mathematical Circus" took place from 11 am until 12 pm at the Auditorium on the Seventh Floor of the Latin University of Panama, Panama City. This free in-person event for the entire family was given by our international invited speaker Tiago Hirth from Portugal.











NOVEMBER - DECEMBER 2022

28

03

9:00 AM -5:00 PM



Math Jamboree Volunteer Staff Training Camp

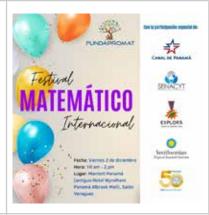
From Monday, November 28th until Saturday, December 3rd, 2022 the Math Jamboree Volunteer Staff Training Camp took place at the Marriott Panama Hotel in Albrook Mall, Panama City. This Camp included the participation of our volunteers Cristobal Quezada and Camila Espinoza from Chile, Ernestina Hernandez and Marco Serrano from Mexico, Maria Cristina Monachelli, Gisela Diaz, Julieta Parravicini and Romina Busain from Argentina, Ruben Martinez from Venezuela/Colombia, Ramon Martinez from Venezuela/Panama, Alma Gomez from Guatemala, Maria del Rosario Salcedo from Peru, Rafa Oliver from Spain, Tiago Hirth from Portugal, and Marleny Vargas, Yamiselle Diaz and Jordan Martinez from Panama.







10:00 AM -2:00 PM



International Math Festival Celebrating Our Third Anniversary

On Friday, December 2nd, 2022 from 10 am until 2 pm the International Math Festival celebrating our Third Anniversary took place at the Veraguas Room of the Marriott Panama Hotel in Albrook Mall, Panama City. This free in-person event for the entire family included the participation of the National Secretariat of Science, Technology and Innovation of Panama (SENACYT), the Panama Canal Authority (ACP), the Smithsonian Tropical Research Institute (STRI), IEEE Panama Section and the Explora Center of Sciences and Art.









10

10:00 AM -11:30 AM

5:00 PM -

6:00 PM



Thomas and the second

Math Jamboree #90

The Math Jamboree #90 took place on Saturday, December 10th, 2022 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activity that we present during the virtual event.

In this Math Jamboree #90, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called "Jeanette's Ark" in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Julieta Parravicini for designing this activity for FUNDAPROMAT.





Twenty-First Math Webinar in English

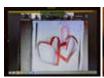
The twenty-first Math Webinar in English took place on Wednesday, December 14th, 2022 from 5 pm until 6 pm with Samantha Pezzimenti, Assistant Teaching Professor of Mathematics at Penn State Brandywine, as our invited speaker. This virtual event was free and open to the general public.

In this twenty-first Math Webinar in English, Samantha Pezzimenti presented on "Math and Crafts: Fun with Möbius Bands." The speaker explained what a Möbius band is and how it can be made by making one half-twist on a strip of paper and attaching the ends with tape. Using strips of paper, scissors, tape and colored markers, the participants made several Möbius bands and explored some of their many magical mathematical properties. This virtual event was co-organized by the Mathematical Association of America (MAA).



Math and Crafts: Fun with Möb<u>ius</u>

Bands!







DECEMBER 2022

25

12:00 PM -1:30 PM



Christmas Lunch for the Maria Guadalupe Shelter

On Sunday, December 25th, 2022 from 12 pm until 1:30 pm FUNDAPROMAT and the company Quick Resuelve joined efforts to organize a Christmas lunch for the Maria Guadalupe Shelter in Corozal, Panama City. This shelter offers comprehensive help to pregnant girls and teenagers in high-risk situations.



25

1:30 PM -2:00 PM



Donation for the Divine Child Shelter

On Sunday, December 25th from 1:30 pm until 2 pm FUNDAPROMAT and the company Quick Resuelve joined efforts to give a donation of cleaning supplies to the Divine Child Shelter in Corozal, Panama City. This shelter receives children from 0 to 5 years old subject to protection measures for violation of their rights.

