MICRO MATHEMATICIANS

Year 5/6
Virtual School Holiday Extension Program

April School Holidays:
Tuesday 13th April - Thursday 15th April 2020
9:30am-3:30pm

ABOUT

Micro Mathematicians is a free three-day holiday extension program aimed at upper primary students who love maths. Students will get to explore mathematical problems at a deep level following the inquiry process.

The program will run using a virtual environment (Zoom and Google Classroom) and students will have 3-hour contact time with the University of Melbourne Outreach Team each day. The remaining hours will consist of students conducting independent work as well as designated lunch and break times.

WHAT WILL STUDENTS BE DOING?

Students will take part in a variety of activities designed to promote mathematical investigation at a high level. Some of the key mathematical areas we will focus on include, but are not limited to; Number Theory, Data Analysis, Combinatorics, Geometry & Topology and Mathematical Biology. Activities include:

- **Problem solving:** engaging with challenging problems through various approaches like modelling, collaborative discussion, construction, proof, and arts and crafts. Activities are open ended to allow students to extend the activity as far as they like and in any direction they choose.

- **Extended Research Project:** working on an extended project across two days. Students can choose between a range of provided problems. Problems are broad and students will need to decide how to narrow the problem down, in what direction they wish to take the problem, what information they will need to answer the problem and what is a suitable approach.

- **Research Presentations:** Students will be required to present their mathematical research to each other, focusing on the methods they used, the results they concluded, and the questions that still remain open.

- **Debate:** Engage in mathematical discussions. Students will take part in group debates where they will argue difficult topics within the field of mathematics.

LEARNING GOALS

While the primary goal is to offer extension in mathematics, we will also be addressing skills in communication, collaboration, and literacy.

ASSUMED KNOWLEDGE

This program is designed for Year 5/6 students working **1-2 years ahead**. They should be comfortable with the following skills (Victorian Curriculum linked):

- Excellent fraction skills including comparing fractions, adding and subtracting, multiplying and dividing, and solving problems using ratios (VCMNA243) (VCMNA244) (VCMNA245) (VCMNA249)

- Comfortable with index notation and representation of whole numbers as products of powers of prime numbers (not necessarily index laws) (VCMNA238)

- Basic knowledge of square roots (VCMNA239)

- Awareness that variables can be used as a way of representing numbers using letters (VCMNA251) (VCMNA252)

- Able to measure interior angles, find angle sums of polygons, and classify triangles (VCMMG264) (VCMMG263) (VCMMG262)

- Able to determine probabilities of events (VCMSP267)

WHO WILL STUDENTS BE WORKING WITH?

The holiday program will be run by passionate Teachers and Mathematicians who are members of the Outreach Team in the School of Mathematics & Statistics at the University of Melbourne.

DETAILS

Date: Tuesday 13th April - Thursday 15th April 2020

Time: 9:30am-3:30pm

Location: Online, via Zoom and Google Classroom

Cost: Free

Materials required: pencil, colour pencils, ruler, rubber, scissors, glue stick, notebook, online access (computer/laptop, internet, Google Classroom, Zoom, webcam, microphone), 25 printed copied of the pyramid net, provided in the welcome pack.

REGISTRATION

Do you have a student who would benefit from this program? If so, please pass on this information to the relevant parents/guardians so their child can complete the admission test. Please note, due to the limited number of places, completing the admission test does not guarantee a place on the program.

Admission Test: https://forms.gle/C2ecTn2Mmb5Gsd4G6

Please submit your admission test by Friday March 5th, 2021.

UPCOMING SESSIONS

There will be additional Micro Mathematicians programs this year. Details will be provided closer to the time. If you are unsuccessful in gaining a place in this program, please do not hesitate to try again for our next program.

CONTACT INFORMATION

For further information, please contact Hayley Ellul.
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