The BRAINWAVES Club

Term 2 2021: Omegas – Years 5 and 6
Venue: Ryde Public School
Term Fee: $285.00
WEAVING MATHEMATICAL MAGIC

Meet Algernon and Georgia the inseparable twins. Algernon loves experimenting with algorithms and discovering how letters work with numbers whilst Georgia is fascinated with geometry, especially experimenting with geometric shapes. Together they often venture off on mathematical explorations to discover how often algorithms and geometry work together to solve problems. You are invited to join these twins in finding how weaving the mysteries of algorithms and geometric shapes with ICT reveals the extraordinary magic of mathematics.

24 April
Meeting 5: Robot Races!
Focus: Time, Speed, Distance
Algernon and Georgia are racing their robots against each other along a set distance. The robot's software program only sets the time in seconds the and the speed in centimetres at which the robots can travel, but not the distance. They need your help in converting the time and speed to the distance for the robots but this isn't quite as simple as it seems. Calculating the distance involves converting speed and time units before applying formulas to comply with the computer program units. Having completed your calculations, you will have the opportunity to test them on a selection of robots.

8 May
Meeting 6: Is it Safe to Cross the Narrow Ridge in Windy Weather?
Focus: Probability, Fractions and Percentages
Algernon and Georgia are planning to hike over the mountains, which could include crossing along a narrow ridge. However, before deciding to do the crossing they need to determine if it would be safe in windy weather. They need your help in calculating the chances of them making it safely across. This will involve you experimenting with some remarkably interesting probability skills before applying them to the twin's problem.

22 May
Meeting 7: No Need for Calculators!
Focus: Fractions, Decomposition and Powers
Disaster! There has been a power surge, the Internet is down and the twins have left their calculators at home. How are they going to complete their maths homework? How did the early mathematicians many thousands of years ago solve their algorithms? At this meeting Algernon, Georgia and you are going to find out as you solve fractions, multiplication and division problems using quite different mathematical methods.

5 June
Meeting 4: Patterns in Algebraic Formulas
Focus: Algebra Equations, Coordinate Geometry, ICT
Algernon has discovered some interesting algebraic patterns and is wondering what visual representations of algebraic formulas really look like. To help him, Georgia has started researching and experimenting with various computer applications and has worked out the steps to graph these algebraic formulas. Using her steps, you will graph some of your own and discover the patterns in them. ***Please bring a laptop with Geogebra Classic 6 loaded.***

What to bring:
Please bring a notebook and a well-stocked pencil case to each meeting as well as a hat, drink and snack for the break (no nuts please).

About the Presenter: Katrina Sims

Katrina has a Master's Degree in Gifted Education. She has taught enrichment mathematics classes for gifted students in the primary system as well as mathematics to students in Years 7 to 10. She is a member of the Australian Mathematics Trust Challenge Problem Solving committee and has a keen passion for problem solving in mathematics. Katrina is the recipient of a National Excellence in Teaching Award and a BH Neumann Award for her contributions to Enrichment of Mathematics for Australian Students.