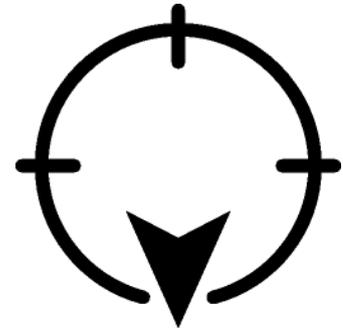


The South

#1



MathsJam has been producing The Shout since 2015. The first contribution from the Southern hemisphere was from Sydney in October 2016.

Since that time, they have been joined by around nine other SouthJams, including (currently) three in New Zealand.

This edition of The South collects some contributions from SouthJams since 2016.

Make 4 = M

The object is to make these 4 pieces into a symmetrical letter M. The pieces must not overlap each other in the final configuration.

Printable pieces: bit.ly/print-m-parts

Timaru, May 2019



28	26	30	27	29	25
34	32	36	33	35	31
16	14	18	15	17	13
4	2	6	3	5	1
10	8	12	9	11	7
22	20	24	21	23	19

Prove Magic Matrix

In this matrix, circle any number and cross out all the numbers in the same row and column. Then pick another number that hasn't been crossed out and do the same. Repeat until you have circled six numbers, and all others are crossed out. What is the sum? What happens if you try again? Why does this work?

Sydney, October 2017

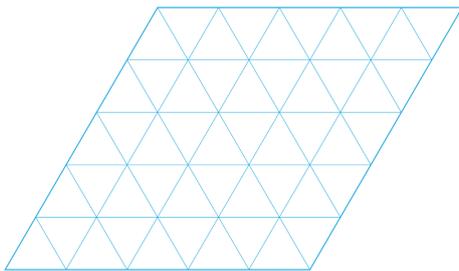
Play Triangles

This game has been devised by Hart, from Sydney MathsJam. It uses a rhombus-shaped grid of triangles.

The object of the game is to force your opponent to create a triangle.

- Players take turns folding the paper along a crease, always reducing the area of the overall shape
- If at the end of a player's turn the, the overall shape of the paper is a triangle, that player loses

Printable grid: bit.ly/trianglesgrid



Sydney, October 2016

Puzzle Averages

Bob drives between Melbourne and Ballarat at 40km/h for the first half of the time and 80km/h for the remaining time. Betty drives on the same route at twice the speed for the second half of the distance as the first half. At what speeds should Betty travel for each half to have the same average speed between the cities as Bob?

Melbourne, October 2018

Game Snaggletooth

There are some tokens on a 5 x 5 grid. Each token occupies one cell in the grid, and no two tokens can occupy the same cell. Each token can be moved in a straight line (horizontally or vertically) until it 'hits' another token and stops the cell before.

From each of the following starting configurations, see if you can make a sequence of moves to get the tooth to stop on the centre cell, without flying off the edge.

Play online: bit.ly/snaggletooth-online

Christchurch, June 2018

