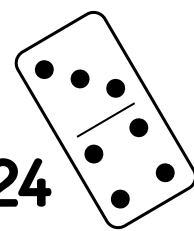


MathsJam Shout

October 2024
Guildford MathsJam



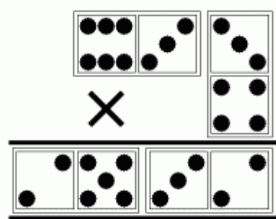
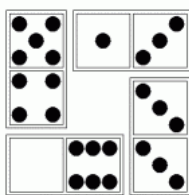
Puzzles Domino Puzzles

With thanks to nrich.maths.org/games/dominoes

If you make a chain with all 28 dominoes from a standard set, so that adjacent ends of dominoes match, what property do the two numbers on the ends have?

If you remove one domino from the set, how does this change?

The spots on each side of this square total nine. Can you make seven arrangements like this using all 28 dominoes so that each square has the same spot-sum for each side?



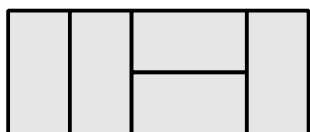
These dominoes represent the multiplication $633 \times 4 = 2532$. Can you arrange the set of 28 dominoes into seven valid multiplications like this?

Printable dominoes: bit.ly/print-dominoes

Polypad Dominoes (on a laptop/tablet):
polypad.amplify.com/p#dominoes

Puzzle Dominoes in strips

How many ways are there to tile a $2 \times n$ strip with 2×1 dominoes?



Make Origami Dominoes

You will need: sheets of standard square origami paper

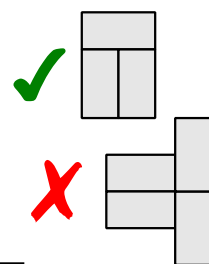


Fold and line up these origami triangular dominoes, which will fall alternately left and right when toppled.

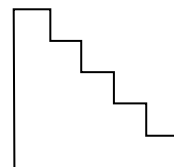
Instruction video: bit.ly/origami-dominoes

Play Tatami Arrangements

Tatami are Japanese floor mats in the shape of a domino (a 2×1 rectangle). They are used to tile rooms, but with the additional constraint that **only three tatami meet** at any corner (never four).



Which shapes can be tiled using tatami mats? What restrictions are there on the sizes of rectangles that can be tiled? What about triangular shapes like this?



How many ways can you tile a $3 \times n$ strip using tatami mats?

MathsJam Shout is a monthly sheet of ideas for activities to do at a MathsJam night. It's created using suggestions from a different MathsJam each month, and if you'd like to submit suggestions for a month in the future, email katie@mathsjam.com for details.

MathsJam is a monthly opportunity for like-minded self-confessed maths enthusiasts to get together in a pub and share stuff they like. Puzzles, games, problems, or just anything they think is cool or interesting. Monthly MathsJam nights happen in over 70 locations around the world, on the second-to-last Tuesday of each month. To find your nearest MathsJam, visit the website at www.mathsjam.com.