

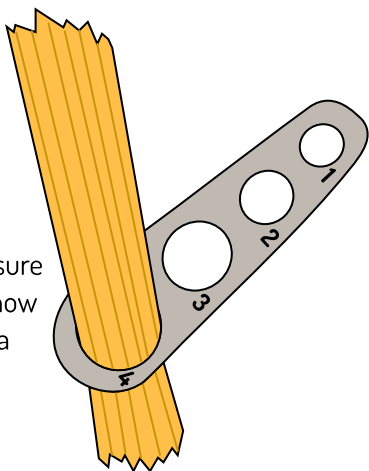
MathsJam Shout

February 2025
Maths teacher Ken Tai

Puzzle Spaghetti Measurer

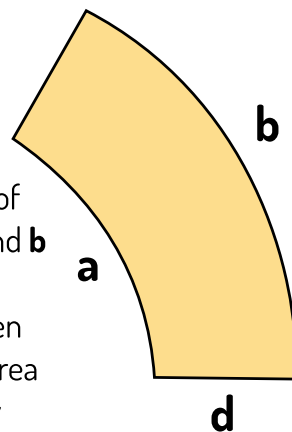
The Spaghetti Measurer is a simple tool for measuring the amount of spaghetti you need. You just pass the pasta through a hole – no scales or bowls required!

If the hole is designed to measure 100g of Spaghetti, but you're now using Capellini (a thinner pasta with the same length and density), will you end up with more or less than 100g pasta?



Problem 2D Macaroni

Imagine we had a 2D version of macaroni. Arcs of lengths a and b are formed by two concentric circles, with a gap of d between them. Can you calculate the area of this 2D Macaroni using only these three measurements?



Inspect Pasta Shapes

Take a close look at this bowl of homemade fusilli – can you spot anything unusual? How many other foods, or objects, can you name with this property?

Bring a range of other pasta shapes to the pub (or find photos of them online to look at). Calculate/estimate which one has the largest surface area, and which has the largest surface area to volume ratio – you could weigh the pasta shapes to obtain an approximation for volume.

How many holes does each type of pasta have in it? What other foods can you name with each possible number of holes?



Make Your Own Pasta

Bring paper, scissors, tape and glue. Can you recreate the shapes of these pasta? Which pasta can't you make? What measurements do you need to make your models accurate?



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.

Knot Tiles

Instructions - Randomly label each row and column with a 0 or 1. Use these numbers to determine which of the four knot tiles to put in the corresponding square. Complete by coloring each path with a different color.

Key

1

0

0

1

