MathsJam Shout

August 2024
Cheltenham MathsJam

Play Strip & Clips

Fold a strip of paper and put two paperclips on it as shown.

Pull the ends of the paper sharply. What happens?

Put a rubber band around various of the sections of paper and try again.

Try with multiple rubber bands.

What other variants can you come up with? Can you predict the outcome?

Numberphile video on this: bit.ly/np-paperclips

Trick David Copperfield's Number Trick

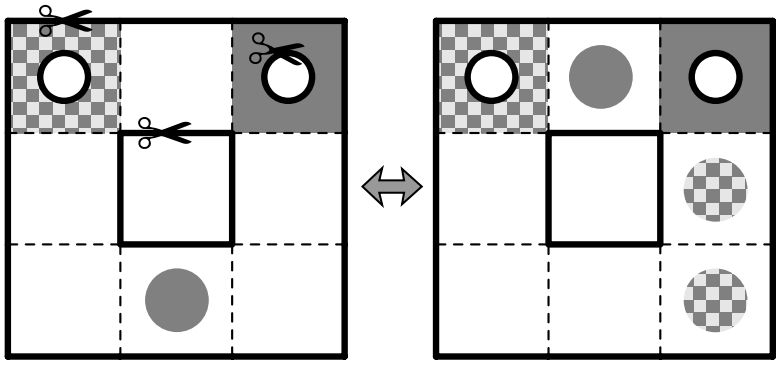
Kyle Evans recently delivered a maths magic show in Cheltenham in which he showed a David Copperfield trick. Try the trick for yourselves, and maybe investigate how it works in other languages!

The trick is based on the same principle as **Kruskal's count** - an alternative video shows a different presentation of the trick, and there's a simulator of a version using a standard deck of playing cards.

David Copperfield video: bit.ly/david-trick
Alternative video: bit.ly/kruskal-vid
Kruskal's Count simulator: bit.ly/kruskal-sim

Puzzle Folding Up The Square

Make the following 3x3 square (the diagrams show the front and back, and the circular white bits are holes). Choose either grey or checked, and fold the paper into a unit square which has the same colour on both sides - with shaded circles visible through the holes.

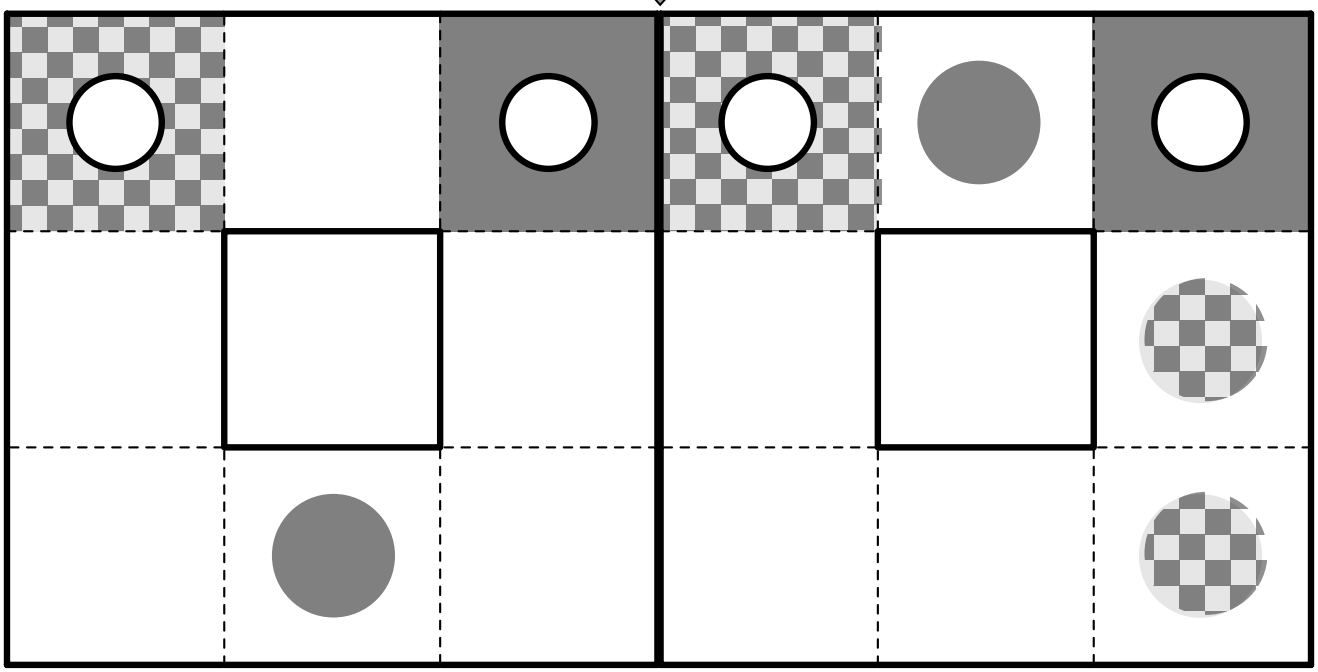
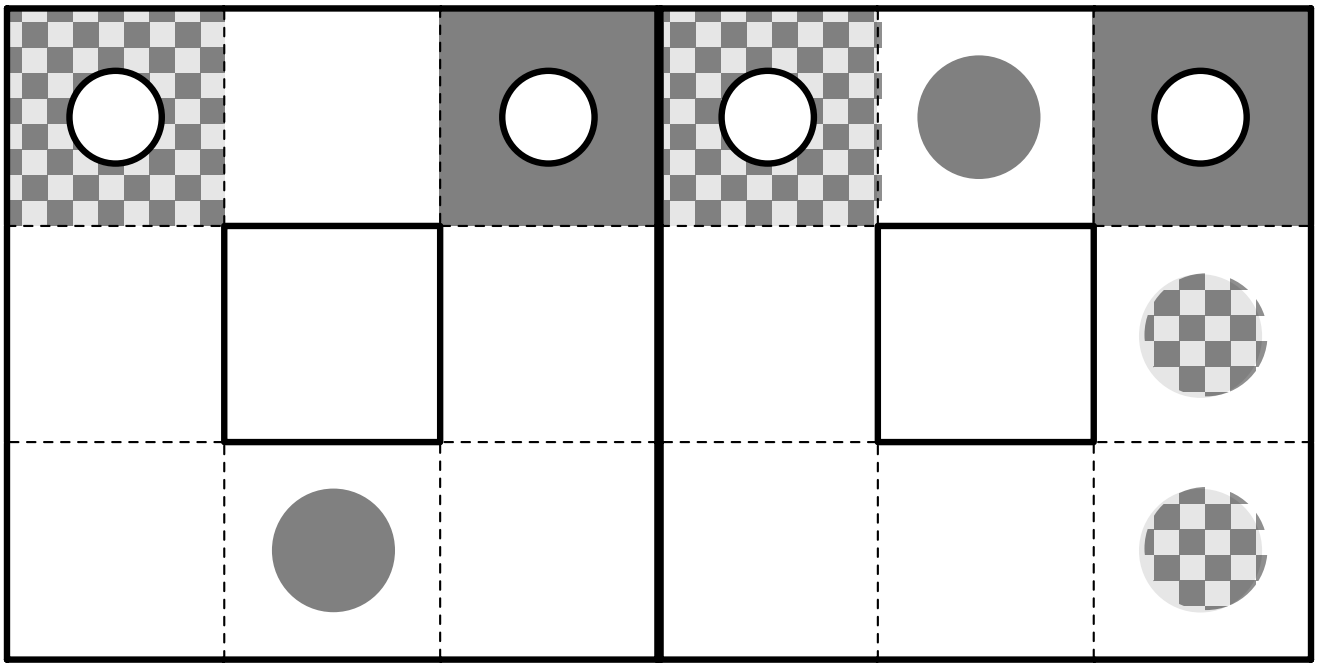
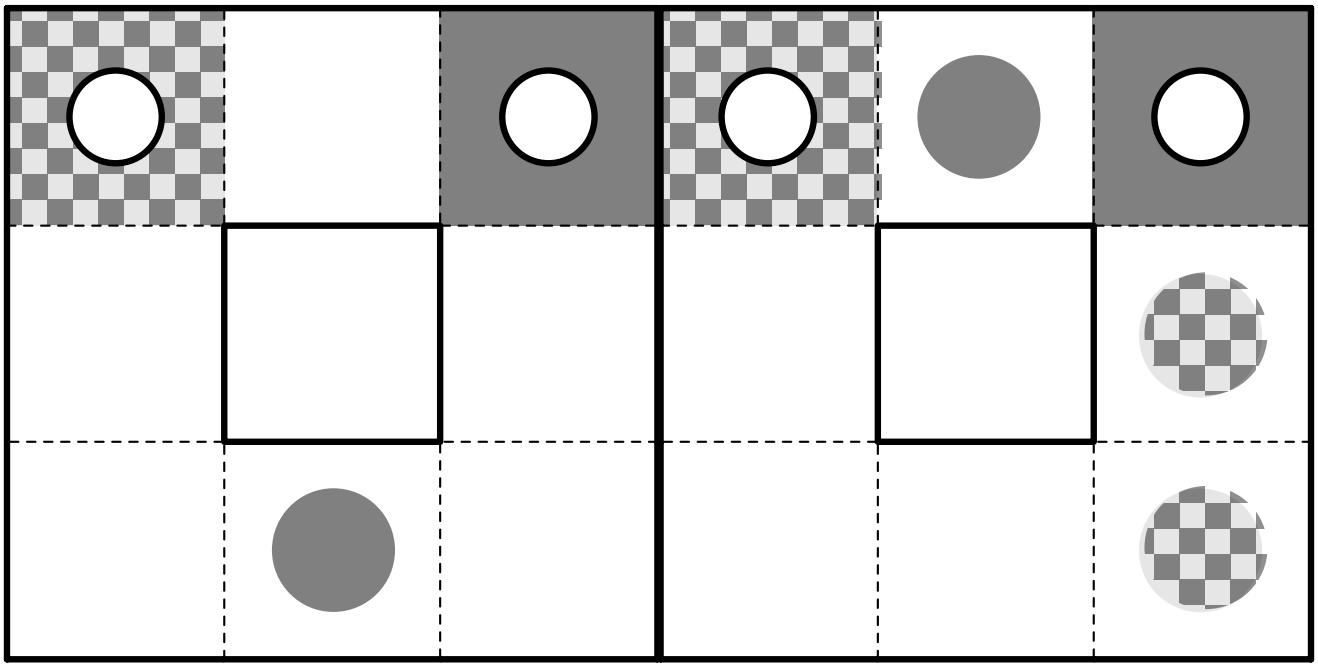


Printable version: bit.ly/folded-square

Puzzle Pentagons

Find a (nonconvex) pentagon that can be cut into two congruent pentagons. Can you generalise to an infinite family of solutions? Can you find other classes of solution?

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**.

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