

G & P Revisited
Eric Solomon's
Hexagrams & More

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Games & puzzles

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SPECIAL KINGMAKER NUMBER

NUMBER 72 SPRING 1979

Kingmaker rules. O.K.
Britain's best puzzles and crosswords
The new games reviewed



Games & puzzles ^{50p}

NUMBER 76 SPRING 1980

**PAGES OF GAMES REVIEWS
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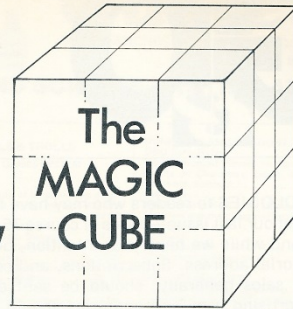
**ALL THE GAMES
ALL THE PUZZLES**

BRIDGE - DIPLOMACY - FANTASY GAMING - NEWS - VIEWS - BRITAIN'S BEST CROSSWORDS



DAVID SINGMASTER

on the puzzle that is driving everyone crazy



'A fiendish device.' 'The Hungarian horror.' 'A new puzzle, completely without precedent.' 'An insidious plot.' 'A masterpiece of three-dimensional design.' 'The opening salvo of the Third World War—designed to reduce the West to gibbering insanity.' 'It sent my roommate crazy—please send two more.' 'I have failed all my finals but I will solve it yet.' 'The inventor has a lot to answer for.' 'My daughter disappeared into her room for two weeks with it.' 'Completely silenced my smart-alec nephew.' 'Guaranteed to drive you mad.' 'Magic Cube Fever will grip the country.' 'The most significant puzzle development of the decade.' 'Replacing worry beads in Hungary.' 'Had to buy one for each member of the family to preserve domestic peace.' 'People followed me out of the waiting room onto my train.' 'Kept the kids quiet from Budapest to Sheffield.' 'Guaranteed to drive you mad.' 'Total oblivion for the rest of your life.' 'The most interesting and novel puzzle of the century.'

Sam Loyd's Puzzle

STRONG words indeed! It is not often that a puzzle bursts on the world and provokes comments on this nature and intensity. The Hungarian Magic Cube bids fair to be the biggest puzzle craze since the first one of all, Sam Loyd's '14-15 Puzzle' of 1873. It is unlikely that any reader will remember this so perhaps some descriptions of it will be of interest both historically and as a premonition of what may come with the Magic Cube. According to Loyd, 'People became infatuated with the puzzle and ludicrous

tales are told of shopkeepers who neglected to open their shops; of a distinguished clergyman who stood under a street lamp all through a wintry night trying to recall the way he had [solved it] . . . Pilots are said to have wrecked their ships, engineers rush their trains past stations and business generally became demoralised. A famous Baltimore editor tells how he went for his noon lunch and was discovered by his frantic staff long past midnight pushing little pieces of pie around on his plate! Farmers are known to have deserted their plows.' H. E. Dudeney, England's greatest puzzler and Loyd's equal and rival, writing in 1926, says: 'in 1873 [it] was sold by the million and for a short time almost monopolised the attention of Europe and America . . . And it has been stated, though doubtless it was a Yankee exaggeration, that some 1500 weak-minded persons in America alone were driven to insanity by it. Certain London shops in Cheapside and elsewhere sold nothing else and were besieged from morning to night, while hawkers at every street corner found it impossible to supply the demand.'

More recently, readers may recall the advent of Crosswords, *Monopoly*, *Scrabble*, *Flexagons*, *Soma Cubes*, *Instant Insanity* (or its predecessor, *The Tantalizer*), *Pentominoes* and *Mastermind*, but I think the Magic Cube may soon outstrip all of them, excepting Crosswords (which Dudeney describes as the current fad, soon to be over, in 1926).

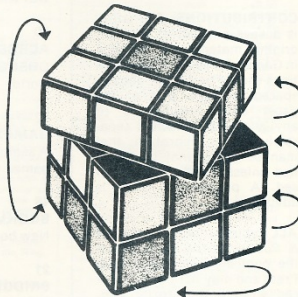
The amazing Cube

AFTER all this hoo-ha, what is this amazing Magic Cube? When you get one, it looks like a cube made up from 27 little cubes in a 3x3x3 array, with colours on the outside so that each of the 6 faces of the whole cube is of a single colour, the six faces being of six different colours. As you hold the cube, you find that it does *not* come apart. Instead you find that *each* face of 9 little cubes rotates about its centre. Further, once a face has been rotated by 90°, the pieces move about and become thoroughly randomised in a few moves. Even expert cubists consider it usually impossible to invert a sequence of 5

'Magic Cube Fever will grip the country'
'The most significant puzzle development of the decade'
'A fiendish device'

random moves, 4 is usually difficult and 3 is tricky for beginners.

It all sounds terribly simple, doesn't it? But can *you* figure out a mechanism to allow each face to turn? Very few people can propose any sort of mechanism and far fewer can produce something which is also practical. I call this the *Basic Mechanical Problem*. Everyone who has tried to solve this problem and then examined the actual mechanism agrees that it is a brilliant piece of three-dimensional invention. The mechanism was devised, as a puzzle, about 5 years ago, by a Hungarian sculptor, architect and designer, Professor Ernő Rubik of the School for Commercial Artists in Budapest. It has taken some time for the manufacturing techniques to be developed and some teething problems had to be overcome. Quantities only started arriving in the U.K. in the Spring of 1979 and demand continues to outstrip supply, even in Hungary where they are said to be replacing worry beads. Over a million have already been made and production is increasing rapidly toward the million per year rate.



Back to Cube One

BUT the Basic Mathematical Problem is what really drives people around the twist. Namely, how do you get the wretched thing back to its original pattern of singly coloured faces (variously known as START, GO, Square One or Cube One)? Part of the solution of this requires determining exactly what the possible patterns are. Would you care to guess or estimate how many different patterns there are? Hint (?)—the



térbeli logikai játék

Games & puzzles ^{50p}

NUMBER 73 SUMMER 1979

Five Pages of Games Reviews

SILHOUETTES & SOLOGRAMS
Brilliant
new puzzles

David Parlett
on cards

PRIZE COMPETITIONS • WORDGAMING • BRITAIN'S BEST CROSSWORDS



SOLOMON'S HEXAGRAMS

by Dr. Eric Solomon An artistic shape-puzzle by the inventor of Black Box, Sigma File, Thoughtwave, Balloon Race, Spellmaker and Alaska

THE humble hexagon has many fascinating properties, and probably has many yet to be discovered. Whilst playing around with ways of sub-dividing hexagons the author found the set shown in Figure 1. These represent all ways of joining the edges of a hexagon and shading some, or all, of the regions produced. In fact, the divisions which produce four regions are not included in the set for technical reasons.

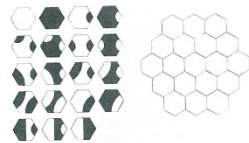


Fig. 1

Fig. 2

The puzzle is to fit all the 'elements' of the set onto the hexagonal board shown so that all the edges in contact match up properly. That is, black edges touch black edges, white edges touch white edges, and so that mixed edges match up in the same way.

The whirlpool design of Figure 3 shows one solution. It generally takes about twenty minutes to obtain a solution if the puzzler is concerned only with getting all the pieces onto the board, and not with producing any particular shape. Figure 4

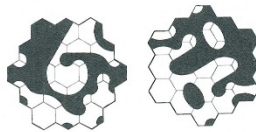


Fig. 3

Fig. 4

shows an interesting type of solution in that it is symmetric, or more correctly anti-symmetric. Every black area is exactly balanced by a similar white area on the other side of the board.

Look at the basic set in Figure 1 again. The pieces occur in pairs with the second piece of each pair being black where the first is white, and vice versa. There is just one exception — the last piece shown is its own 'dual'. That is, after reversing the colours it could be rotated to look exactly the same as it was! The easiest way to produce a solution is to put this self-dual piece in the middle of the board and arrange the dual pairs symmetrically around it.

Some thematic designs are shown in the other figures. Note that the principal 'object' of the hexagram can be in black, as for the Octopus in Figure 5, or in white, as for Bambi in Figure 6. The board can be viewed in one of two directions, of course.

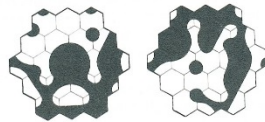


Fig. 5



Fig. 6



Fig. 7



Fig. 8

There is much fascination in producing artistic work subject to severe limitations such as those imposed by these hexagrams. Despite these limitations, designs of considerable power and elegance sometimes result. The beautiful 'Breakwater' of Figure 7 is reminiscent of a

detail from a Japanese print. Figure 8 shows how the edge of the hexagram can be used to 'suggest' parts of a design which are not actually present on the board.

There is plenty of scope for humour, as can be seen in Figures 9 and 10. Wellington at Waterloo (Figure 9) displays his bi-corn hat and suggests the famous Wellington nose; the picture is completed with flying cannon-balls and the smoke of battle. Why is the dipsomaniac weeping in Figure 10? Look at this bottle and you will see why!

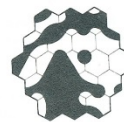


Fig. 9



Fig. 10

SOLOMON'S HEXAGRAMS

The ideal puzzle for the young genius, or for anyone.



The inventor has produced sets of easy to cut out hexagram elements complete with board, description, and record sheets, all in a neat plastic envelope.

PRICE £1.00 (postage included) from

Eric Solomon, 3 Clissold Court, Greenway Close, Green Lanes, London N4 2EZ.

COMPETITION £90 in prizes!

— and you are not limited in the number of prizes you can win! PRIZES of £10, £5 and £3 are offered for original Solograms (Solomon's Hexagrams) in each of the following categories:

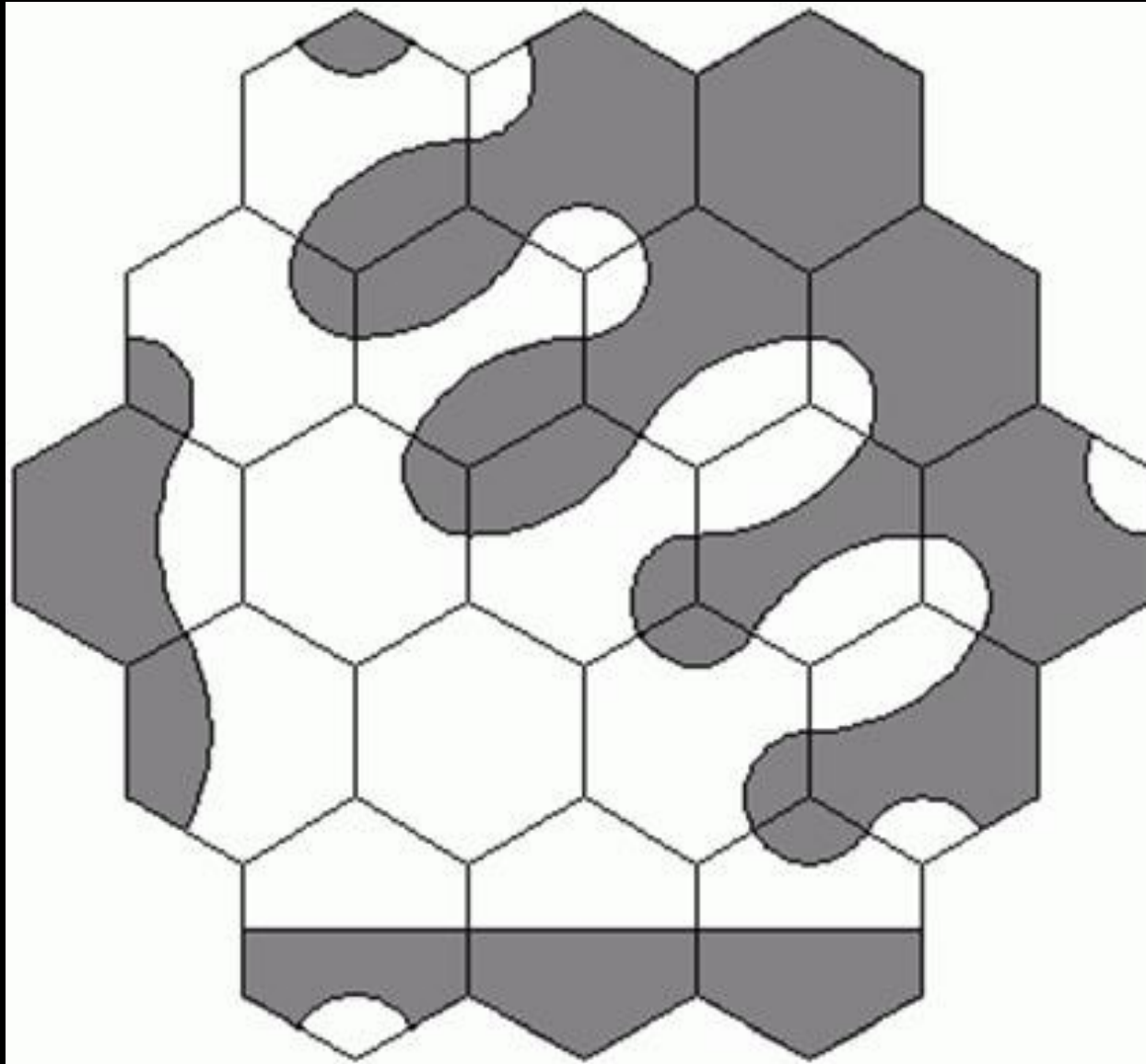
- CATEGORY A: Best overall design
- CATEGORY B: Best abstract design
- CATEGORY C: Best animal design
- CATEGORY D: Best thematic design
- CATEGORY E: Best humorous

Our normal competition rules apply (page 39) except that you may submit any number of designs in any or all of the above categories, and the closing date is 31st July 1979. You must enclose with your entry a signed statement surrendering copyright of your submitted design(s). Please mark your envelope 'Hexagrams'. The judges reserve the right not to award any prize if, in their opinion, entries are not of sufficient merit. Winning designs will be published in *Games & Puzzles*.

Set of 1, 2 or 3
regions gives
19 tiles

Large radii
centred on
adjacent hex
diameter $1\frac{1}{2}$

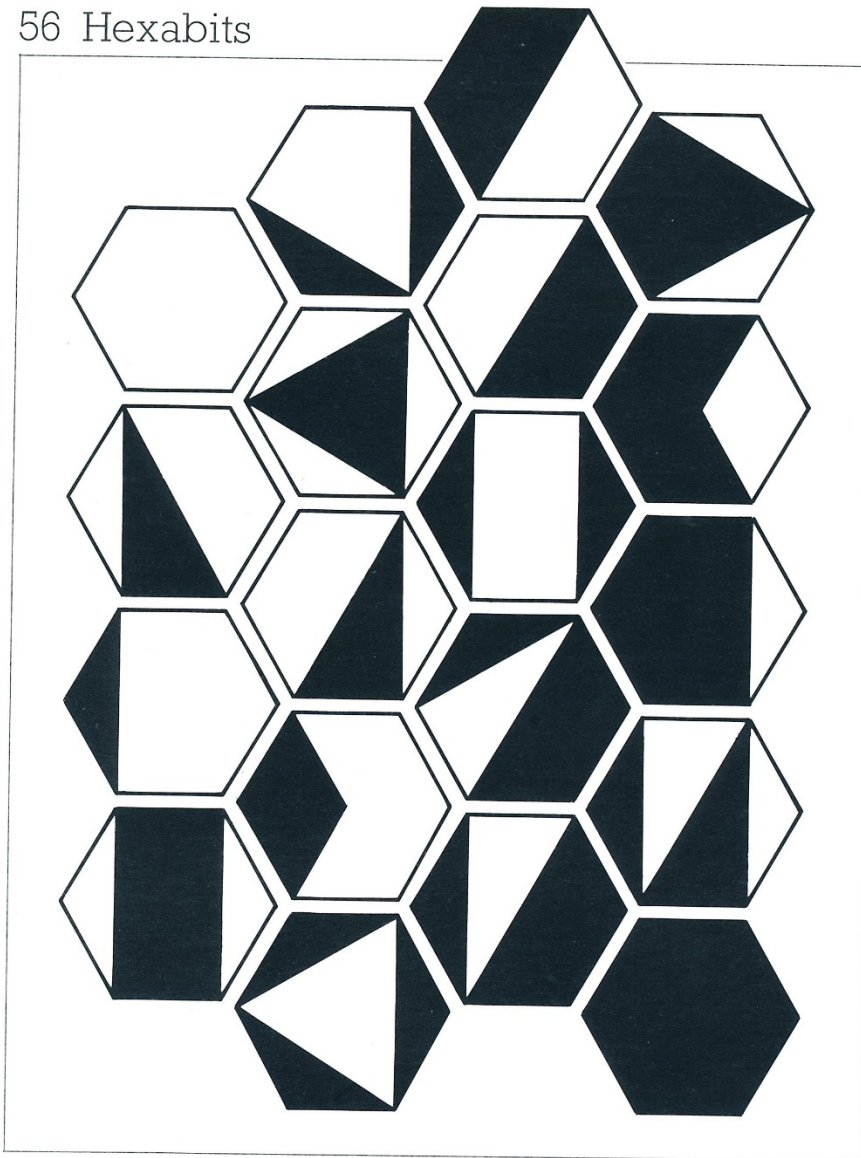
Small Radii
centred on hex
corners
diameter $\frac{1}{2}$



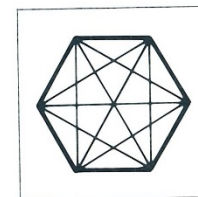
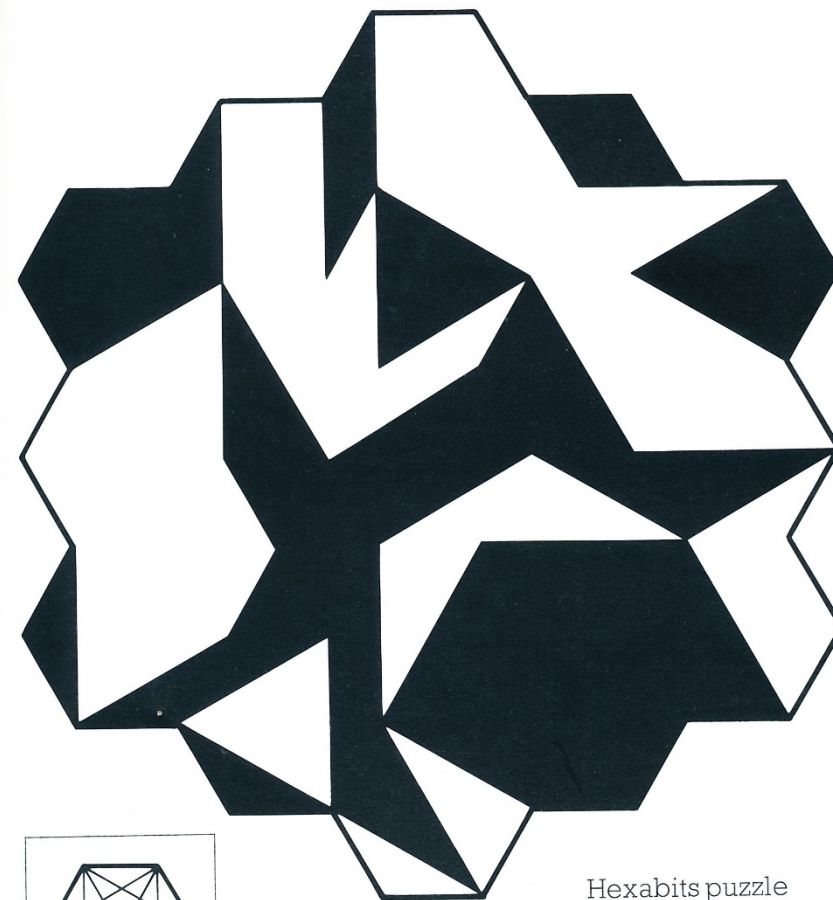
<http://www.ericcsolomon.co.uk>

'Hexabits'
from
Ian
Moscovich's
Super-Games
(published 1984)

56 Hexabits

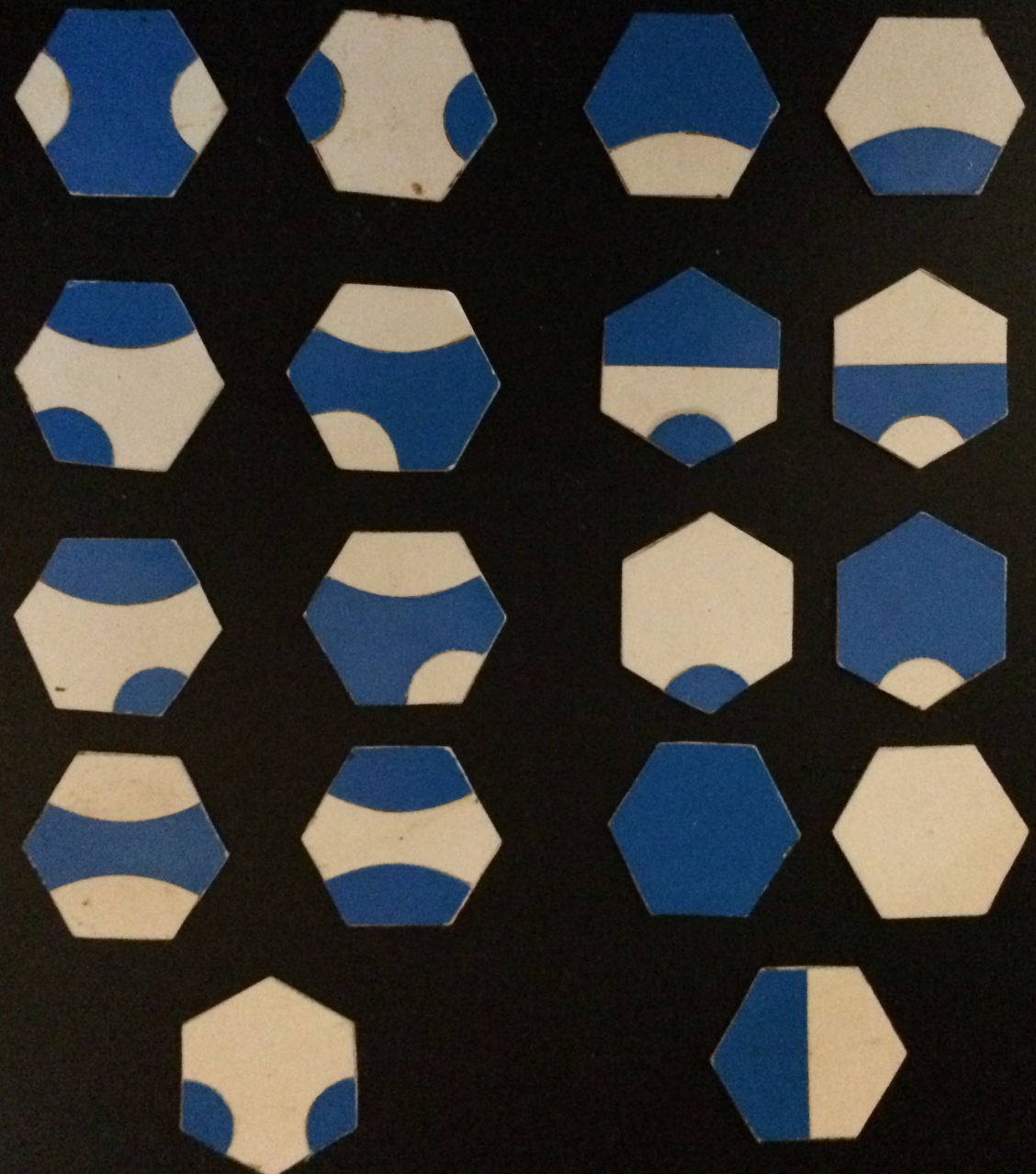


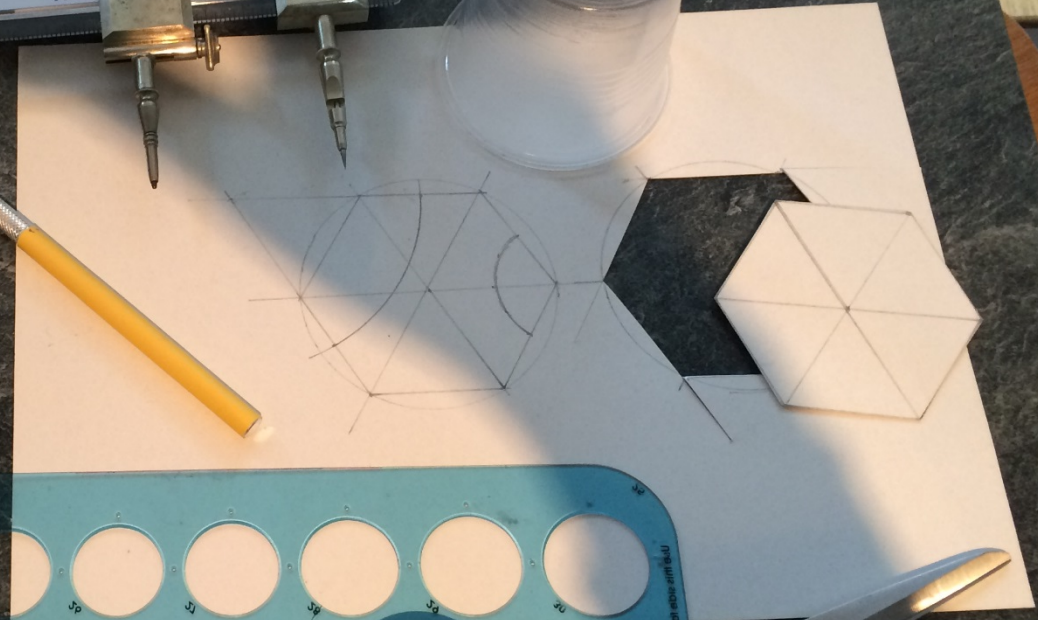
Hexabits 57

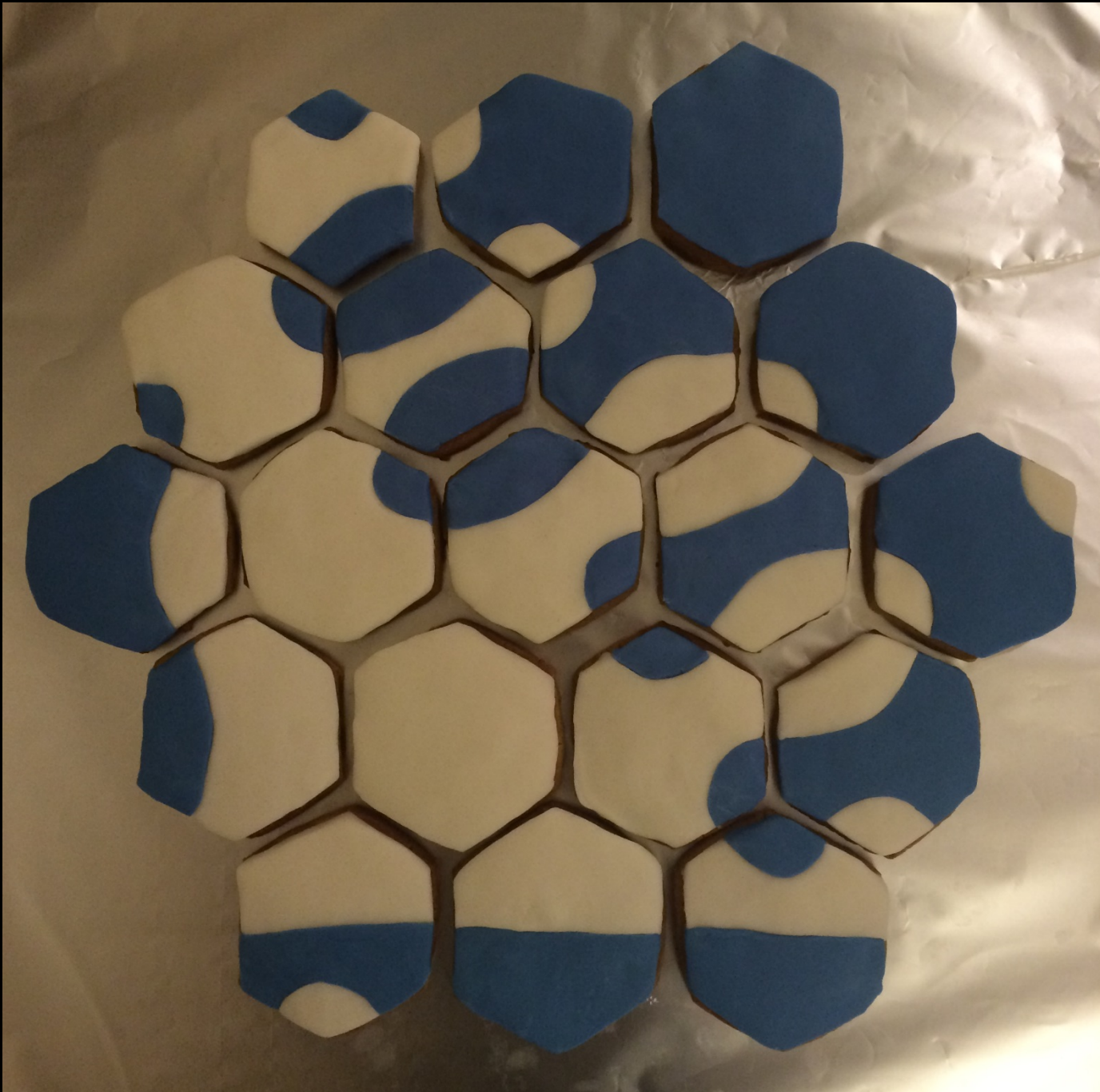


Hexabits
Dissection structure

Hexabits puzzle
solution
Can you find another
solution?





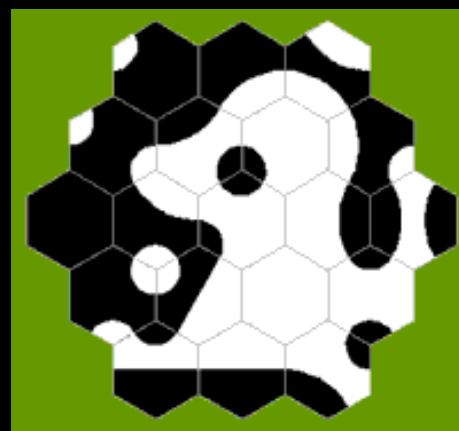




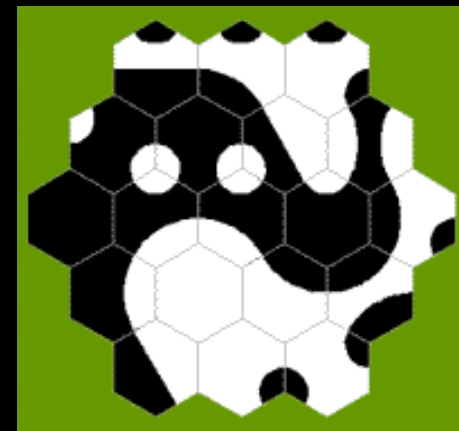
Octopus



Bambi



Puppy



Elephant



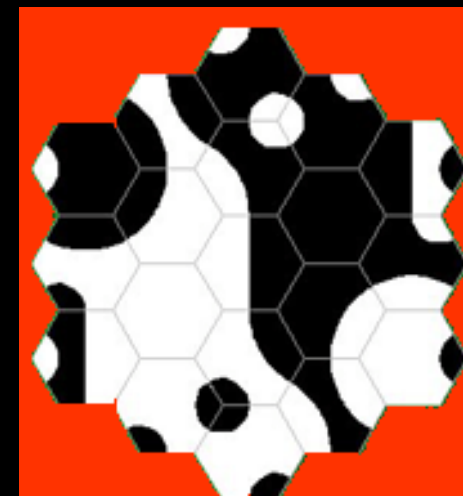
Plane
Tiler



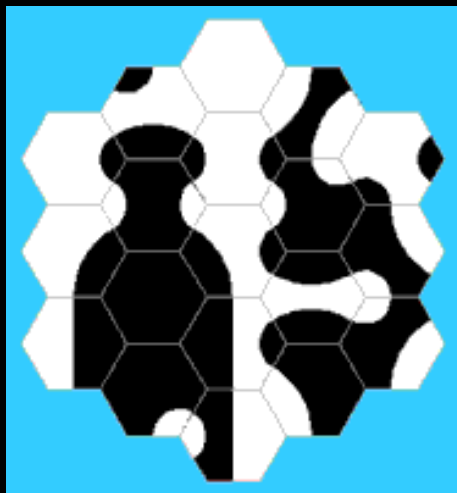
Only 2-2
Solution



Largest
Region



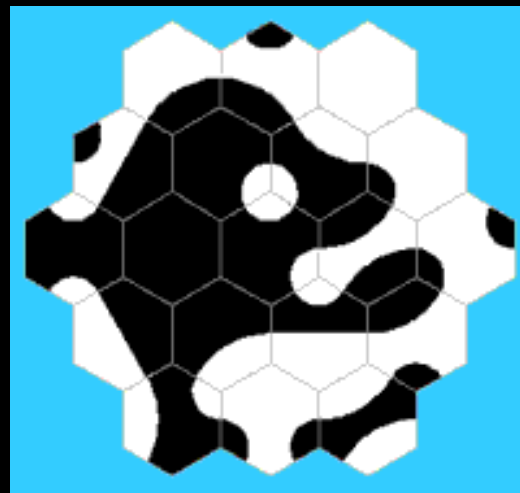
An 8-8
Solution



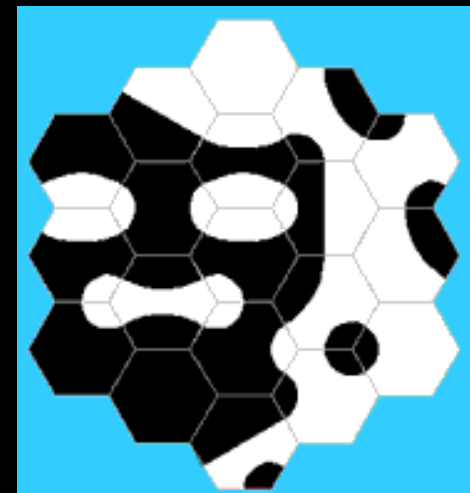
Weeping Wino



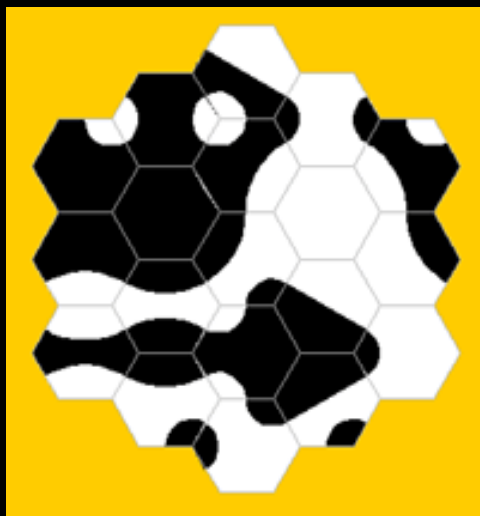
ET Plays
Football



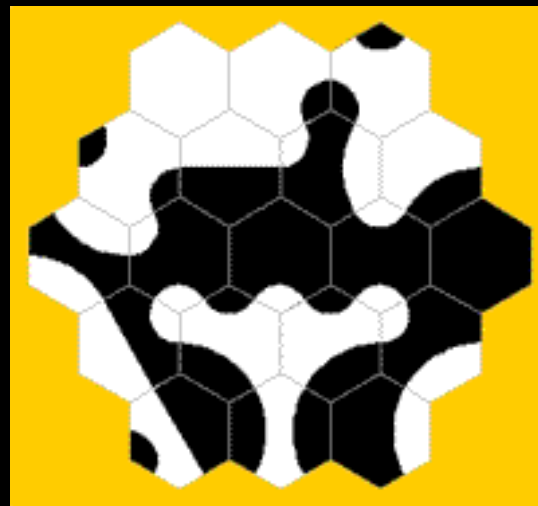
Where are
Grandma's Teeth?



This Soap
Tastes Terrible



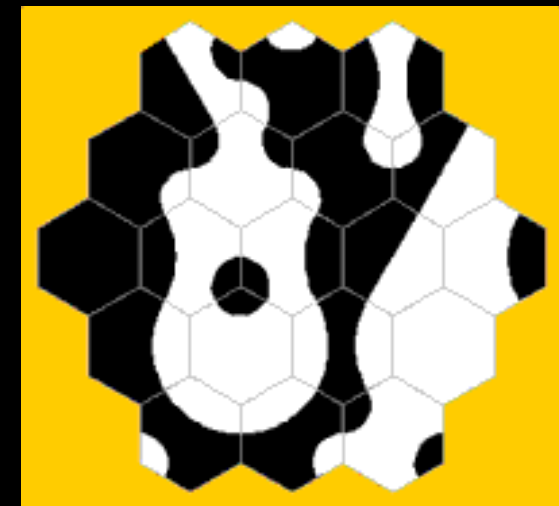
Tribal
Spear



Plumbers
Delight



Still Life
With Urn



Broken
Guitar

G & P Revisited

Eric Solomon's

Hexagrams & More

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