



Bridges 2020 virtual conference

Aug. 1-5, 2020

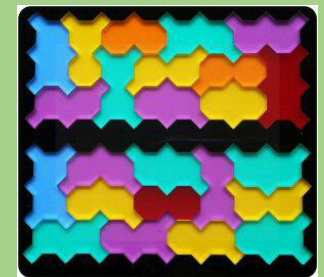
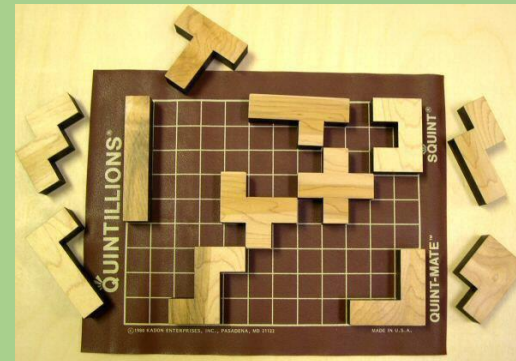
The playable art of Kate Jones
since 1979



Above: Kate Jones display at Bridges 2019, Linz, Austria. Right: Kids love to solve!

Dear Bridges members and guests, we miss being with you in person this year. So please see all of our unique and original mathematical puzzles and games on our website, www.gamepuzzles.com! Over 250 heirloom-quality handcrafted sets of beautiful geometric design for the joy of thinking. Order safely online, free shipping within U.S. Here are a few **hottest** sellers. See descriptions below.

www.gamepuzzles.com





Triangule-8™

Euler's 19 triangulations of the octagon

by Kate Jones, President, Kadon Enterprises, Inc.

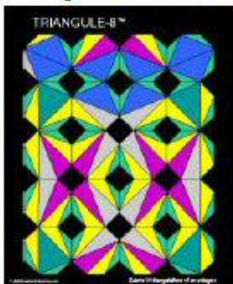
2019-2020 was Kate's 40th year of creating, designing, developing, and producing mathematical puzzles and games as an art form. Each set is researched, sometimes for years, to discover the many challenges inherent in its combinatorial tilings. Each set's theme and concepts, the mathematical principles that define it, are a paradigm of the marvels of the Universe, and so they are designed with aesthetic, mathematical, and philosophical qualities that make them a joy to play and explore, inspiring the young and intriguing the most advanced scholar. Kate has dedicated most of her life to the making and selling of these "math-as-art" sets, and continues so with undiminished excitement at each new discovery. People see them as "playable art".

Of course, we stand on the shoulders of giants. The world's treasury of early pioneers in the field of mathematics has left us a trail to follow and new heights to achieve. One of these heroes of mathematical ascendance was Leonhard Euler (1707-1783). One of his simpler contributions was the triangulation of convex polygons. The total number of ways to triangulate a convex polygon by non-intersecting diagonals is the $(n-2)$ nd Catalan number, $\frac{n(n+1) \dots (2n-4)}{(n-2)!}$ whose solution was found by Leonhard Euler. The distinct number of different ways to triangulate an octagon, omitting rotations, turns out to be 19.

This phenomenon was used by Edward T. Hollins, a magician and artist, in 1994 to generate patterns for an elegant tangrams-related tiling he called *Shardinaires*. Kadon produced a limited number of these in hand-inlaid metallic-like acrylic as high-end art pieces. It was discontinued a few years later, but Edward's 19 slips of paper that he had roughed out in drafting *Shardinaires* gave Kate the inspiration to make all the tiles into a larger and more versatile art set, adding a 20th tile as a wildcard to gain much-prized symmetry.



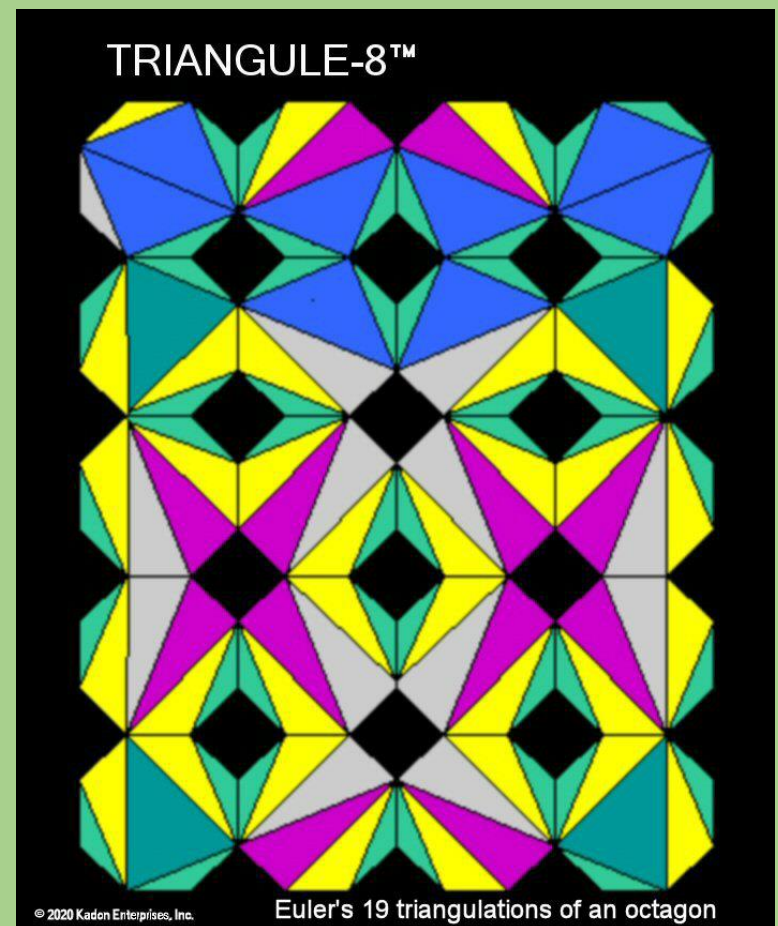
Each shape of triangle received its own color, including congruent triangles that were joined in pairs, and a dramatic set of edge-matching tiles emerged as a constantly changing puzzle in a 14x12" framed tray. If only Leonhard could have seen this celebration of his discoveries!



The accompanying printed and framed *Triangule-8* art poster measures 60 x 48 x 1 cm (16x24"). It displays a nearly symmetrical, color-matched solution of the 19 triangulation patterns (plus a spare). The hand-inlaid acrylic version can be crafted in custom colors to order, as shown on <http://www.gamepuzzles.com/tactile.htm#T8>

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Here's a little description of the five sets, left to right:
Octiles--18 unique octagon wood tiles with paths to connect at edges, build roads for your runners across the board..
Pentarose--adaptation of Penrose tiles into a beautiful work of art, many non-periodic solving challenges.
Quintillions--the 12 precision-cut solid pentominoes, build endless 2D and 3D figures, play 5 games for 2-4 people.
Ochominoes--24 unique polyform tiles of octagons and squares (polyocts), find countless patterns and solutions.
Roundominoes--28 tiles, in 7 shapes of circles and bridges (polyrounds). Many puzzle challenges, 3 games for 2 players. See full descriptions and ordering information on my website, www.gamepuzzles.com | All product names are proprietary trademarks of Kadon Enterprises, Inc.



<https://www.facebook.com/groups/391950357895182/>

Mathematical tiling and tessellation

Aug. 4, 2020

Greetings, tessellation lovers. I'm happy to be able to meet you all here at a virtual gathering, though I miss being at Bridges in person this year. I've been designing and making combinatorial tilings for 41 years. Here are a few, along with pictures of my exhibit at the 2019 Bridges in Linz, Austria. You can see over 200 other tessellation and tiling sets at my website, www.gamepuzzles.com

Here's a little description of the five highlighted sets, left to right:

OCTILES--18 uniquely patterned octagon tiles with paths to connect at edges, build ways for your runners across the board from home to goal.

PENTAROSE--adaptation of Penrose tiles into a beautiful work of art, many solving challenges.

QUINTILLIONS--the 12 precision-cut solid pentominoes, build endless 2D and 3D figures, play 5 strategy games for 2-4 people.

OCHOMINOES--24 unique polyform tiles of octagons and squares (polyocts), find countless patterns and solutions.

ROUNDOMINOES--28 tiles, in 7 shapes of circles and bridges (polyrounds). Many puzzle challenges, 3 games for two players.

See full descriptions and ordering information on my website, www.gamepuzzles.com



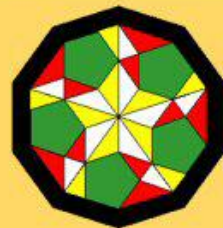
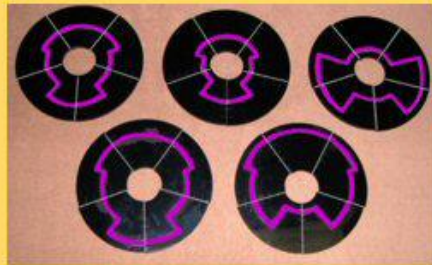
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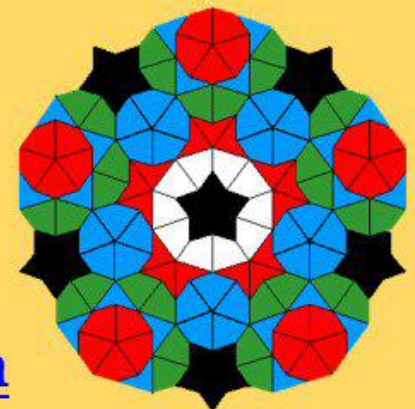
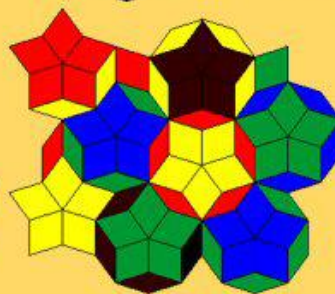
“The Golden Ratio”!

in the playable art of Kate Jones

Dear Bridges members and guests, I’ve been designing and making combinatorial and polyform puzzles since 1979, a joyous four decades of mind-bending discoveries. Of special appeal are tiling sets based on *phi*, the golden ratio. I feature a few here. Please see our website for all our other puzzles from the Pentagon Universe, www.gamepuzzles.com/pentuniv.htm, each with its detailed workbook. Order safely online, free shipping within U.S.



Small and large kits of Penrose Diamonds, Penrose Kites & Darts, golden triangles, and polyform sets of golden triangles, and large and small artistic combinations in display trays. Some sets are suitable for as young as 6, others will tease even a PhD.



www.gamepuzzles.com

<https://www.facebook.com/groups/391950357895182/permalink/948478078909071>

The Golden Ratio

Aug. 12, 2020

Among the over 200 original puzzles Kadon has produced since 1979 are some new and classic sets based on the golden ratio. Take a look here, then see them all on our website, www.gamepuzzles.com/pentuniv.htm

Here's a bit of explanation of sets shown.

First row:

ARC ANGLES--25 curved trapezoids with paths that join. All 25 can form a single loop (rounded pentagon). With strategy game for 1-4 players.

DEKA-MOSAIK, DEKA-STAR, KITE-MOSAIK in decagon trays show math as art.

Bottom row:

PENTAROSE--based on Penrose prototiles, many designs and challenges.

LA ORA STELO--polyform of 1 to 3 golden triangles in pentagon tray, many difficult tasks. Created by Jacques Ferroul.

Large kits (hundreds of tiles) of **PENROSE DIAMONDS**, golden triangles (**COLLIDESCAPE**), and **PENROSE KITES & DARTS** for huge explorations. Each in 5 colors. Strategy games for up to 5 players, with game mat, for Kites & Darts.

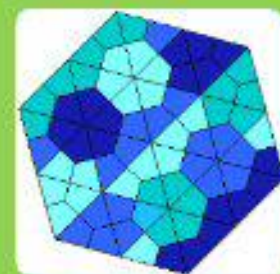
Product names are trademarks of Kadon Enterprises, Inc.



Bridges 2020 "Edgematching" *the playable art of Kate Jones*

**Compatible differentness! Join all-different parts
into beautiful partnerships!**

One of the most popular puzzle themes: match colors or shapes. The best-known tile-matching game is *dominoes*. Now we bring you colorful, artistic tilings encompassing a century of ideas. See our beautiful big online gallery at www.gamepuzzles.com/edgemtch.htm. Here are some samples, complex and pleasurable, based on triangles, squares, hexagons. Rearrange them in hundreds of ways. And each unique piece contributes its special features to the full composition, like individuals collaboratively building their community, or a band synchronizing their music. Order safely online, **FREE SHIPPING** within U.S.



www.gamepuzzles.com

<https://www.facebook.com/photo.php?fbid=10158023512503375&set=p.10158023512503375&type=3>

Edgematching

Sept. 3, 2020

One of the most popular puzzle themes is matching tiles by colors or shapes. The best-known tile-matching game is dominoes. Now we bring you colorful, artistic tilings encompassing a century of ideas. See www.gamepuzzles.com/edgemtch.htm for our entire collection on this theme. Here we show some samples, complex and pleasurable, based on triangles, squares, hexagons. Rearrange them in hundreds of ways. And each unique piece contributes its special features to the full composition, like individuals collaboratively building their community, or a band synchronizing their music. Order safely online, FREE SHIPPING within U.S. -- Then check out our entire website of recreational math puzzles: www.gamepuzzles.com

Here's a brief description of the gamepuzzles shown, clockwise from upper right:

Trifolia – 24 unique curvy-edged triangles solve a book full of figures, play 3 games, 2-4 players. For age 12-adult.

Multimatch IV – 24 unique hand-inlaid triangles, match and non-match plus beautiful symmetry patterns. 1 or 2 players, age 8-adult.

Multimatch I – 24 unique square tiles inlaid with 3 colors, hundreds of matching challenges, based on 100-year-old design by British mathematician Maj. Percy MacMahon. For 1 or 2 players, age 8-adult.

Cookie Jar – 13 uniquely shaped tiles form hundreds of splendid figures. Play 2 games. 1-3 players, age 10-adult.

Leaves – 13 unique leaf-shaped tiles, tricky challenges mixing the autumn colors. A work of art with display stand, for 1 or 2 players, age 10-adult. 11" tray.

MemorIQ ("Memory Cue") – 24 unique hexagon tiles inlaid with 4 colors. hundreds of patterns to solve. Display stand included. 11" round tray. 1 or more players, age 12-adult.

MiniMatch I – Award winner! 9 unique inlaid squares match 4 colors, many themes. For 1 or 2 players, age 6-adult.

Hexmozaix Jr. – 24 unique hexagons inlaid with 4 colors, create many designs. 7.5" tray, 1 to 4 players, age 6-adult.

Kaliko – 85 unique wood hexagons with paths match colors to build long loops. Exquisite puzzle shapes. For 1 to 4 players, age 8-adult.

More details on these and other sets: www.gamepuzzles.com/edgemtch.htm with order forms, free shipping in U.S.