Golden 16

Gathering 4 Gardner
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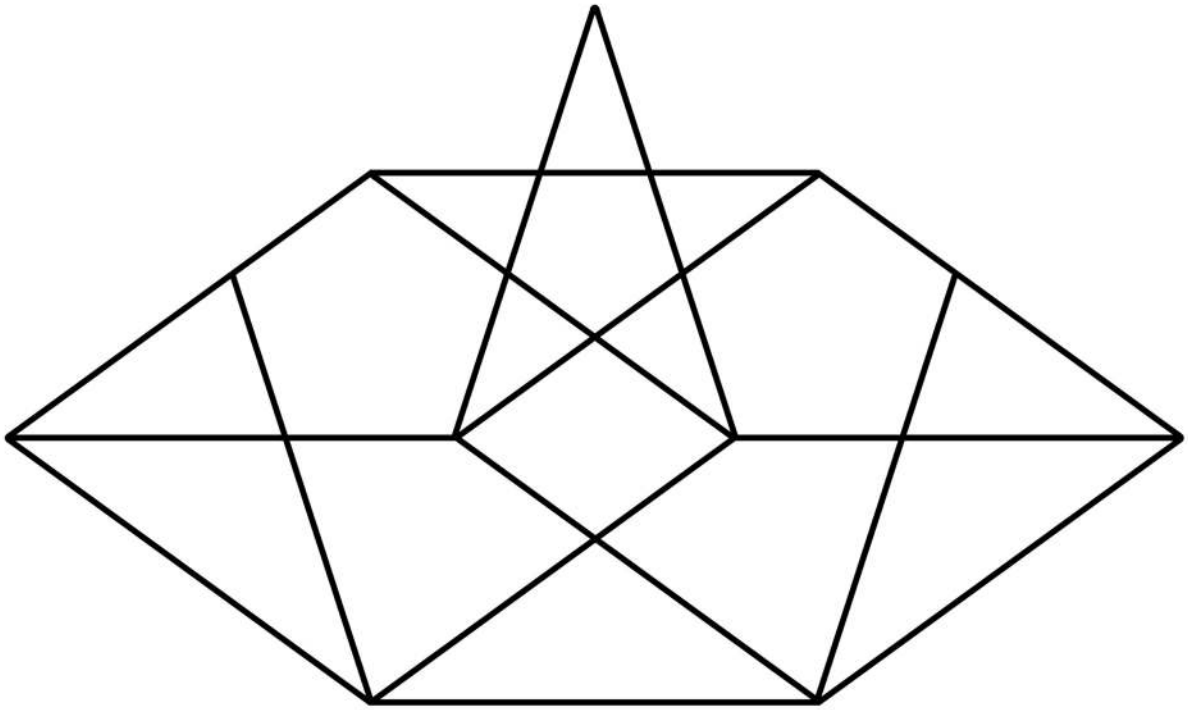

Martin Gardner wrote about Penrose tilings in his Scientific American column back in January 1977, in his article "Extraordinary nonperiodic tiling that enriches the theory of tiles," and he explained them further in his books *Penrose Tiles to Trapdoor Ciphers* and *Time Travel and Other Mathematical Bewilderments.*

In this composition that I especially designed for Celebration of Mind 2016, the global birthday party in Martin Gardner's honor, we can observe an interplay of various geometrical shapes from Penrose tilings P1 and P2 (thick and thin Penrose rhombs, and kites). Adding some lines also reveals Penrose darts, as well as pentagons, triangles, and pentagonal stars at different size scales. The composition reveals its fractal nature and displays self-similarity and golden mean relations, and the golden ratio is used as a scale factor.

The line drawing evokes in our mind's eye a certain degree of perceptual ambiguity, giving an impression of a 3D object that our minds organize in different ways. I decorated the space around the composition with the geometrical shapes mentioned above so that you can easily find them inside the composition. You might want to have fun coloring the composition in various ways. Or you can print out the page, cut out the shapes, and assemble the elements in your own Golden 16 composition.

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