File:Sacred-cut-drawn-with-straight-edge-and-compass.svg

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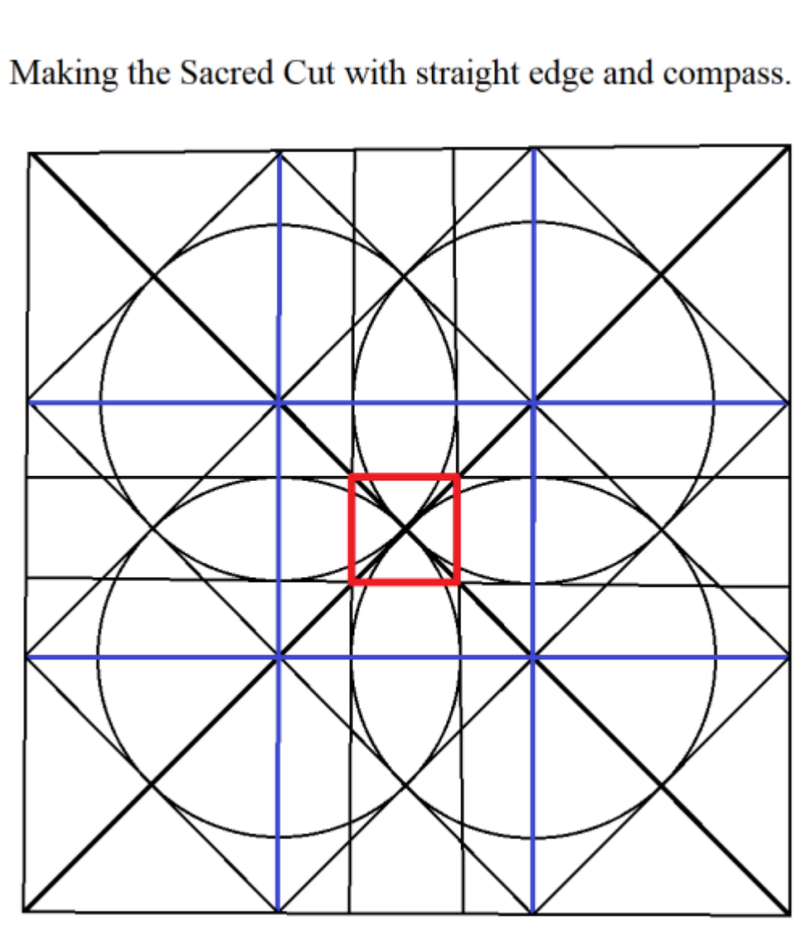

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Original file (SVG file, nominally 909 × 1,000 pixels, file size: 52 KB)

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Captions Edit

English — Making a sacred cut with a straight edge and a compass to produce the silver ratio.

Summary [edit]

Description	**English:** The “silver ratio” can be drawn using a straight edge and a compass in a manner of "the sacred cut" by drawing four circles centered on the four corners of a blue square (in this drawing) whose radii are equal to one-half the length of the diagonals of this blue square. The resulting inner red square is considered the "sacred cut" of the outer blue square. The blue square has a proportionality to the red square equivalent to one plus the square root of two units of length for the blue square versus one unit of length for the red square. Additional lines can be extended outwardly to form another square of similar proportions to the blue square. Despite the singular instance of the silver ratio, the sacred cut can be postulated to extend itself into at least a few more variations. The silver ratio is based on ... 1. The prime number of two times its quadrature resulting in an eight-sided equilateral polygon, also known as an octagon. But there are also ... 2. The dodecagon of twelve sides (four times the prime number of three), and ... 3. The icosagon of twenty sides (four times the prime number of five). All three of these possibilities can be discovered using a simple program, written in either Java, or JavaScript, or PERL, or PHP, etc., to search for any equilateral polygon of 4 times a prime number of sides whose diagonals and side can form a proportional pair of ratios that will satisfy the solutions of a quadratic polynomial in one unknown all of whose coefficients are integers or rational fractions.
Date	7 January 2023
Source	Own work
Author	Vinyasi

Using PERL installed on a 64-bit Windows operating system, a non-exhaustive search was performed using this code. It was discovered that there are three different sets of Sacred cuts which are extensions of the Silver ratio made famous by the Pell series of numbers.

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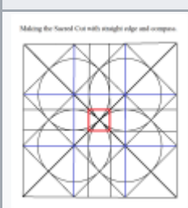
current	21:09, 7 January 2023		909 × 1,000 (52 KB)	Vinyasi (talk | contribs)	Uploaded own work with UploadWizard

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