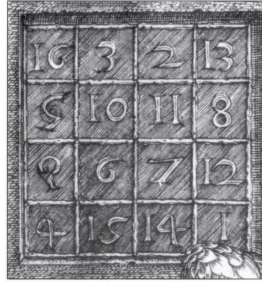


In recreational mathematics, a magic square is an arrangement of distinct numbers (i.e. each number is used once), usually integers, in a square grid, where the numbers in each row, and in each column, and the numbers in the forward and backward main diagonals, all add up to the same number. A magic square has the same number of rows as it has columns, and in conventional math notation, “n” stands for the number of rows (and columns) it has. Thus, a magic square always contains n^2 numbers, and its size (the number of rows [and columns] it has) is described as being “of order n”.[1] A magic square that contains the integers from 1 to n^2 is called a normal magic square. (The term “magic square” is also sometimes used to refer to any of various types of word squares.)



The order-4 magic square in Albrecht Dürer’s engraving Melencolia I is believed to be the first seen in European art. The sum 34 can be found in the rows, columns, diagonals, each of the quadrants, the center four squares, and the corner squares (of the 4×4 as well as the four contained 3×3 grids). This sum can also be found in the four outer numbers clockwise from the corners (3+8+14+9) and likewise the four counter-clockwise (the locations of four queens in the two solutions of the 4 queens puzzle[18]), the two sets of four symmetrical numbers (2+8+9+15 and 3+5+12+14), the sum of the middle two entries of the two outer columns and rows (5+9+8+12 and 3+2+15+14), and in four kite or cross shaped quartets (3+5+11+15, 2+10+8+14, 3+9+7+15, and 2+6+12+14). The two numbers in the middle of the bottom row give the date of the engraving: 1514. The numbers 1 and 4 at either side of the date correspond to the letters ‘A’ and ‘D’ which are the initials of the artist.

Sagrada Família magic square

A magic square on the Sagrada Família church façade

The Passion façade of the Sagrada Família church in Barcelona, conceptualized by Antoni Gaudí and designed by sculptor Josep Subirachs, features a 4×4 magic square:

The magic constant of the square is 33, the age of Jesus at the time of the Passion. Structurally, it is very similar to the Melancholia magic square, but it has had the numbers in four of the cells reduced by 1.

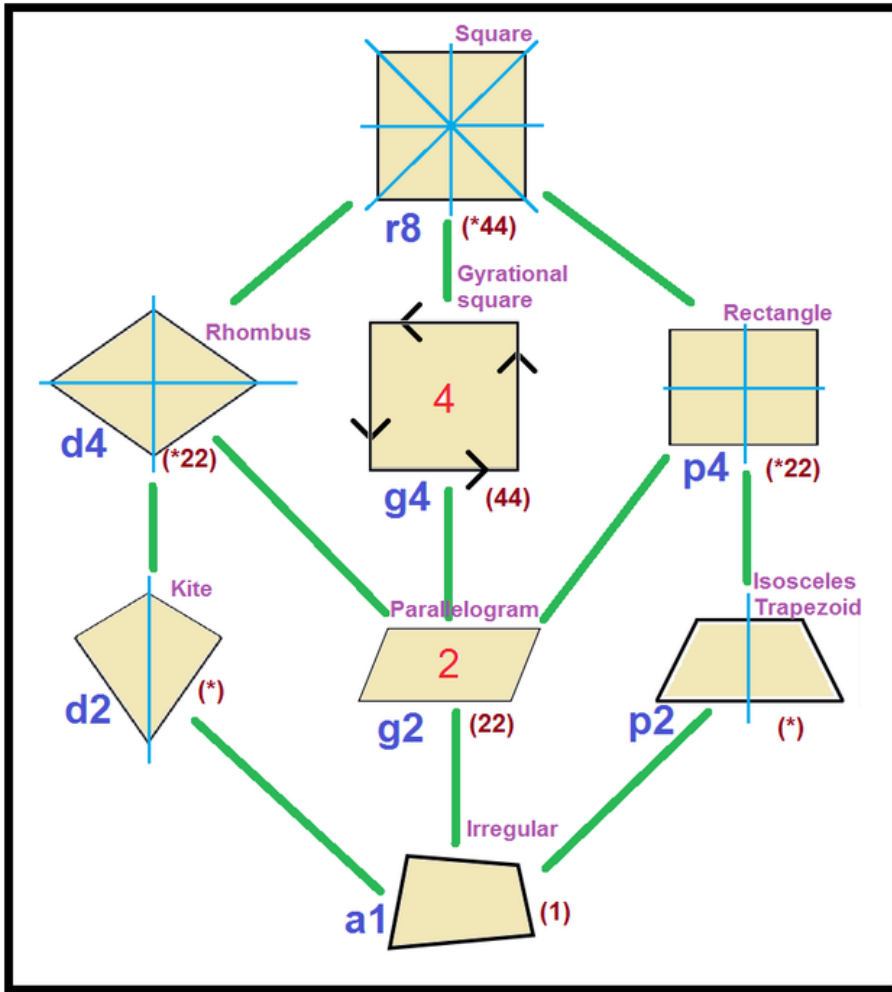
1	14	14	4
11	7	6	9
8	10	10	5
13	2	3	15

While having the same pattern of summation, this is not a normal magic square as above, as two numbers (10 and 14) are duplicated and two (12 and 16) are absent, failing the 1→ n^2 rule.

Similarly to Dürer’s magic square, the Sagrada Família’s magic square can also be extended to a magic cube



http://en.wikipedia.org/wiki/Magic_square#cite_note-19



a **square** is a regular quadrilateral, which means that it has four equal sides and four equal angles (90-degree angles, or right angles).[1] It can also be defined as a rectangle in which two adjacent sides have equal length. A square with vertices ABCD would be denoted ABCD

<http://en.wikipedia.org/wiki/Square>