

5TH ORDER ASSOCIATED MAGIC SQUARES WITH INLAID DIAMONDS

3	17	5	24	16	65
15	22	7	20	1	65
12	18	13	8	14	65
25	6	19	4	11	65
10	2	21	9	23	65
65	65	65	65	65	65

Figure 1.

There are only $62 \times 8 = 496$ of these out of:

15,511,210,043,330,985,984,000,000

ways of placing numbers in the square. The red numbers show the magic diamond which sums 39. The whole square sums 65.

Associated magic squares are those that have the property of balance across the centre such as 3 and 23 sum 26 as does 18 and 8, etc. The pairs of numbers that sum 26 are equidistant from the centre in opposite Directions.

The 5th order diamond inlaid squares which are not associated are more plentiful. There are 976×8 of them.

The factor 8 mentioned above is, of course, the 8 aspects (rotations and reflections).

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