

Some illustrated comments on the Dürer magic square and on some Dürer-like classic 4×4 magic matrices

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We define the “Dürer magic square” (Frénicle #F175) as the classic 4×4 magic square in the top right-hand corner of the 1514 engraving *Melencolia I* by the German painter, engraver and mathematician Albrecht Dürer (1471–1528). We identify 168 Dürer-like classic 4×4 magic matrices in which the entries 15 and 14 appear contiguously as in the Dürer magic square. We find that these 168 magic matrices come in just 6 flavours. We give special attention to Dürer-like magic matrices of Dudeney Type 3 and find that one of these is essentially the magic square on the Agrippa–Cardano–Paracelsus–Kircher planetary talisman as studied recently by Styan, Trenkler & Chu [*Lectures on Matrix and Graph Methods* (Bapat, Kirkland, Prasad & Puntanen, eds.), pub. Manipal Univ. Press (p. 179, 2012)]. We illustrate our findings with Anderson graphs (Bragdon’s “magic lines” diagrams, Moran’s “sequence designs”) and whenever feasible with images of postage stamps or other philatelic items. With this talk we are pleased to celebrate the 70th birthday on 14 July 2013 of Götz Trenkler, who introduced us to the Dürer magic square [*Image*, no. 27, pp. 3–10 (2001)], and at the same time to celebrate the International Year of Statistics 2013 and the special year for Mathematics of Planet Earth 2013.