

1046-92-1668

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When investigating fractal and fractal-like images, mathematicians and biologists have tried to quantify various aspects of the image. The fractal dimension has (in some sense) been used to measure how much space an object occupies. In an effort to quantify the manner in which that space is occupied, various measures have been proposed, including lacunarity and the nearest neighbor distance. We suggest that computing the average distance between points in the set might be a more useful measure and compute the average distance between points in the Cantor set and several of its variants. (Received September 16, 2008)