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The mathematics of doodling.

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This article is based on the author's 2009 first Hedrick lecture in Portland, Oregon. It covers, in the author's words, "beautiful elementary problems, the triangle inequality, area with multiplicity, winding numbers, topology, differential geometry, physics, a Hilbert problem, work of a number of fields medalists, and current research in algebraic and hyperbolic geometry." Most of the material (though not all) will be familiar to most mathematicians; but this should not stop anybody from reading it for pleasure. More particularly, though, it should be read by undergraduate students, as an accessible introduction to the various subjects listed above; by graduate students, as a model of nontechnical mathematical writing; and by rising stars in research, as an example of what a plenary talk should be.

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Classification: A80

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