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The lemniscate of Bernoulli, without formulas.

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"A polynomial lemniscate with foci $F_1, F_2, \ldots, F_n$ is a locus of points X such that the product of distances from X to the foci is constant ($\prod_{i=1,\ldots,n} |F_iX| = \text{const}$). The n-th root of this value is called the *radius* of the lemniscate. It is clear that a lemniscate is an algebraic curve of degree (at most) $2n$" (from the text). Using purely synthetic arguments, the author presents three constructions of the Bernoulli lemniscate ($n = 2$, const $= (1/4)|F_1F_2|^2$), one is based on a three-bar linkage invented by James Watt. In the same way it is proved that the Bernoulli lemniscate is an inversion image of an equilateral hyperbola. Finally, a very simple construction of the normal of the Bernoulli lemniscate is described. *Rolf Riesinger (Wien)*

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