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Geometric Representations of Dedekind's Proof of Irrationality.

In *Essays on the Theory of Numbers*, Richard Dedekind gives a general algebraic proof that if N is a positive integer that is not the square of an integer, then \sqrt{N} is irrational. In the 1960's, Stanley Tennenbaum gives the geometric representation of Dedekind's proof for which $N = 2$. In this talk we'll look at the geometric representations of Dedekind's proof for which $N = 3, 6, 8$ and 12 and their constructions which are similar to the construction for the $N = 2$ case. (Received September 22, 2014)