

1135-VS-3025 **Kimberly E. Stubbs*** (stubbske@g.cofc.edu), 196 Curtis Creek Rd, Candler, NC 28715.
Geometric Representations of Dedekind's Proof of Irrationality. Preliminary report.

In *Essays on the Theory of Numbers*, Richard Dedekind gives a general algebraic proof that if D is a positive integer that is not the square of an integer, then \sqrt{D} is irrational. In the 1960's, Stanley Tennenbaum gives the geometric representation of Dedekind's proof for which $D = 2$. In this talk we'll look at the geometric representations of Dedekind's proof for which $D = 3, 5, 6, 8,$ and 12 and their constructions which are similar to the construction for the $D = 2$ case. (Received September 26, 2017)