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Andrew J. Miller* (andrew.miller@belmont.edu), Dept of Mathematics and Computer Science, Belmont University, 1900 Belmont Blvd, Nashville, TN 37212. *“Beauty is Truth, Truth Beauty”*: *The Aesthetics of Mathematical Arguments*. Preliminary report.

The beauty of the subject is one of many things that draw mathematicians to the field. Such beauty is not limited to the objects of study. Rather, a greater part of the delight mathematicians take in their subject is found in the aesthetics of proofs, the rigorous arguments at the core of the field. Such beauty is often difficult to describe to the non-mathematician. We explore some of the many natural questions prompted by this reality, including: What makes a proof beautiful? How does this contrast and compare to beauty in other fields? Can a non-mathematical argument be beautiful? The discussion will include examples of beautiful proofs. (Received September 22, 2010)