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Matthew D Bradley* (bradley3@wit.edu). *An Infinitude of Proofs for the Infinitude of Primes.*

A prime number is an integer greater than 1 which is only integrally divisible by 1 and itself. It was first proven by Euclid in 300 BC that there are infinitely many of these prime numbers. Mathematicians from Greece to Japan have studied the mysterious set of prime numbers. Throughout the ages a multitude of additional proofs for the infinitude of primes have been discovered. These proofs elegantly incorporate many branches of mathematics, from point-set topology, to analysis and number theory. (Received September 20, 2016)