

1125-VN-34 **Jay Lawrence Schiffman*** (schiffman@rowan.edu), 604-36 South Washington Square # 815,
Philadelphia, PA 19106. *Variations on The Harmonic Series*. Preliminary report.

The Harmonic Series represents one of the most important series studied in the calculus classroom. This paper will explore variations on the divergent harmonic series (which is asymptotic $\log n$) including the harmonic series of primes (which diverges even more slowly and is asymptotic $\log \log (n)$) and the harmonic series of twin primes converging to Brun's constant. In addition, we will explore the harmonic series of Fibonacci and Lucas numbers (both series converge) and some harmonic series of figurative numbers including the harmonic series of square, triangular, pentagonal, hexagonal and octagonal numbers which all converge. The deployment of Mathematica will aid in our explorations. (Received June 06, 2016)