

1135-M1-1190 **John J B Webb*** (webbjj@jmu.edu), Department of Mathematics & Statistics, 305 Roop Hall, MSC 1911, James Madison University, Harrisonburg, VA 22807. *Can $1 + 2 + 3 + 4 + 5 + \dots$ really equal $-1/12$?*

In 2014, Numberphile set the mathematical world ablaze when they posted a video to YouTube (<https://www.youtube.com/watch?v=w-I6XTVZXww>) of two physicists claiming to prove that $1 + 2 + 3 + 4 + 5 + \dots = -1/12$. The video has over 5 million views to date, which probably means that its one of the most popular math videos ever (or something like that). We will discuss this “proof” and some of the deep connections this divergent series has with the innocuous looking little fraction, $-1/12$. (Received September 20, 2017)