

Abstract of paper [1].

We study averages of the quantity $R_{HL}(n) = \sum_{m_1+m_2=n} \Lambda(m_1)$. In particular, for any $k > 1$ we give an “explicit formula” for

$$\sum_{n \leq N} R_{HL}(n) \frac{(1 - n/N)^k}{\Gamma(k+1)}$$

in terms of the Gamma function evaluated at suitable combinations of the Riemann zeta-function, and of Bessel functions of complex order.

References

- [1] A. Languasco and A. Zaccagnini. A Cesàro average of Hardy-Littlewood numbers. *J. Math. Anal. Appl.*, 401:568–577, 2013.