

## Average orders of certain arithmetical functions

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**Abstract.** We consider the functions  $M(n)$ , the maximum exponent of any prime power dividing  $n$  and  $m(n)$ , the minimum exponent of any prime power dividing  $n$ . The sums  $\sum_{n \leq x} M(n)$  and  $\sum_{n \leq x} m(n)$  have been well investigated in the literature. In this note, we will improve known estimates of both the above sums under the assumption of the Riemann hypothesis. We will also obtain  $\Omega$ -type estimates for these sums unconditionally.

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