# On the \$lell_p\$ Norm of GCD and Related Matrices 

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Abstract:

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We estimate the $\ell_{p}$ norm of the $n \times n$ matrix, whose $i j$ entry is $(i, j)^{s} /[i, j]^{r}$, where $r, s \in \mathbb{R},(i, j)$ is the greatest common divisor of $i$ and $j$ and $[i, j]$ is the least common multiple of $i$ and $j$.

