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GENERALIZED VON NEUMANN–JORDAN CONSTANT $C_{NJ}^{(p)}(X)$ FOR THE REGULAR OCTAGON SPACE

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Abstract. In this paper, we study the exact values of the generalized von Neumann-Jordan constant $C_{NJ}^{(p)}(X)$ for X being the regular octagon space. We give that $C_{NJ}^{(p)}(X) = 1 + (\sqrt{2}-1)^p$ is valid for $p \geqslant 2$, and $C_{NJ}^{(p)}(X) = 2^{2-p}[1 + (\sqrt{2}-1)^{\frac{p}{p-1}}]^{p-1}$ for $1 < p \leqslant 2$.

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