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Gordon, Y.

Asymmetry and projection constants of Banach spaces.

Israel J. Math. **14** (1973), 50–62.

If (A, α) is a normed linear ideal of operators and E is an n-dimensional normed space, put $\alpha(E) = \alpha(I_E)$, where I_E is the identity operator on E. If $(A^\Delta, \alpha^\Delta)$ is the conjugate ideal, then $n \le \alpha(E)\alpha^\Delta(E) \le \min(n(s(E))^2, 3n(\delta(E))^3)$, where $s(E)$ is the asymmetry constant of E and $\delta(E)$ the diagonal asymmetry constant of E. A more complicated result is obtained for the unconditional asymmetry constant $\chi(E)$. It is shown that there exist finite-dimensional normed spaces with arbitrarily large diagonal asymmetry constant. It is also shown that the projection constant of a two-dimensional normed space is always less than $\sqrt{2}$.

Reviewed by *D. J. H. Garling*