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On affine invariant points

Affine invariant point is a function $f$ from the set of convex bodies in $\mathbb{R}^n$ into $\mathbb{R}^n$ satisfying the condition $f(\varphi(K)) = \varphi(f(K))$ for any convex body $K$ and any affine transformation $\varphi$. We design a new class of affine invariant points. Denoting by $\mathcal{F}$ the set of all affine points we answer the question by Grünbaum how big is the set $\{f(K) \mid f \in \mathcal{F}\}$ for any given convex body $K$. 