

SOME RESULTS ON DIRECT SUMS OF BANACH SPACES — A SURVEY

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ABSTRACT. We shall discuss three notions of direct sums of Banach spaces, Z -, ψ -, and A -direct sums, which are in fact all isometric. Weak nearly uniform smoothness, uniform non-squareness and uniform non- ℓ_1^n -ness etc. will be discussed, especially in the general A -direct sum setting. As applications some examples of Banach spaces will be presented concerning FPP as well as super-reflexivity.

Key words and phrases. absolute norm, convex function, Properties T_1^N and T_∞^N , direct sum of Banach spaces, weak nearly uniform smoothness, uniform non-squareness, uniform non- ℓ_1^N -ness, fixed point property.