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Ramsey Theory on Vector Spaces

We discuss infinite versions of vector space partitions due to Graham–Leeb–Rothschild. Hindman observed long ago that if V is a vector space over $GF(2)$ with countable dimension then V is indivisible, meaning that for every partition of V into two parts, one of the parts contains an affine copy of V . Together with L. Nguyen Van Thé, M. Pouzet and N. Sauer, we have shown that if V is a vector space over a field different from $GF(2)$ then V is not indivisible: in fact it does not have canonical partitions. If the field is infinite, we can show even more, the vector space can be divided into two parts such that none of the parts contains an affine line. This provides some insight as to the connection between age and weak indivisibility.