

**ZMATH 1996a.00451**

**Beck, I.; Bejlegaard, N.; Erdős P.; Fishburn, P.**

**Equal distance sums in the plane.**

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An equisum set in the plane is a finite set  $X_n$  of distinct points  $[x_1, x_2, \dots, x_n]$  such that the sum of the distances from  $x_i$  to all of the other points in  $X$  is the same for all  $i = 1, 2, \dots, n$ . The authors show that an equisum set in which all the interpoint distances are different must have at least 5 elements. They also investigate the possible numbers of different interpoint distances in an equisum set with 5 elements.

*Classification:* G45