ASYMPTOTIC VALUES OF CRANK DIFFERENCES

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ABSTRACT. Let M(a, c, n) be the number of partitions of n with crank equal to a modulo c. By the crank difference we mean M(a, c, n) - M(b, c, n). In this talk we will give an asymptotic formula for crank differences. Therefore we have to compute the asymptotic value of the Fourier coefficients of the crank generating function. As a result of this analysis we can show that certain crank differences obey certain inequalities that are strict for large enough n and c. All this was done by Bringmann and Bringmann-Kane for the rank of a partition. We therefore close a gap by doing the same analysis for the crank