
Zbl 247.20008**Erdős, Paul; Turan, P.***On some problems of a statistical group theory. VII.* (In English)**Period. Math. Hung. 2, 149-163 (1972). [0031-5303]**

[Part V in Periodica math. Hungar. 1, 5-13 (1971; Zbl 223.10005); Part VI in J. Indian math. Soc., n. Ser. 34 (1970), 175-192 (1971; Zbl 235.10008)]. Denote by S_n the symmetric group of n letters. It is well known that S_n has $p(n)$ conjugacy classes where $p(n)$ is the number of unrestricted partitions of n . The authors prove that for all but $O(p(n))$ of these conjugacy classes the order $O(K)$ of the elements in the conjugacy class satisfies the inequality

$$\exp\{(A_0 - \epsilon)\sqrt{n}\} < O(K) < \exp\{(A_0 + \epsilon)\sqrt{n}\}$$

where $A_0 = \frac{2\sqrt{6}}{\pi} \sum_{j \neq 0} \frac{(-1)^{j+1}}{3j^2+j}$.

Classification:

20B99 Permutation groups

11K99 Probabilistic theory

00A07 Problem books