

In mathematics, particularly in combinatorics, a Stirling number of the second kind is the number of ways to partition a set of  $n$  objects into  $k$  non-empty subsets and is denoted by  $S(n, k)$  or  $\left\{ \begin{smallmatrix} n \\ k \end{smallmatrix} \right\}$ . Stirling numbers of the second kind occur in the field of mathematics called combinatorics and the study of partitions.