

	Ordered (labeled balls)	Unordered (unlabeled balls)
Repetitions Allowed	Lists with repetition n^k	Multisets $\frac{(n+k-1)!}{k!(n-1)!}$
Repetitions Forbidden (at most one ball per box)	Lists of distinct elements $\frac{n!}{(n-k)!}$	Sets $\frac{n!}{k!(n-k)!}$

The four basic list enumerators for k -lists made from n -sets. They can also be interpreted as placing k balls (either labeled or unlabeled) into n labeled boxes. The ball and box interpretation is indicated parenthetically.