

$(x \geq n)$  $(x \leq n)$  $\text{Inj.}$  $\text{Surj.}$  $\leq 1$  $\geq 1$ 

Ball Bag

Any

D D

 $x^n$  $A_x^n$  $x! \left\{ \begin{matrix} n \\ i \end{matrix} \right\}$ 

S D

 $\binom{n+x-1}{x-1}$  $\binom{n}{x}$  $\binom{n-1}{x-1}$ 

D S

 $\sum_{i=0}^x \left\{ \begin{matrix} n \\ i \end{matrix} \right\}$ 

1

 $\left\{ \begin{matrix} n \\ x \end{matrix} \right\}$ 

S S

 $P_x(n+x)$ 

1

 $P_x(n)$