

$$\begin{array}{c} {}^n\mathbb{C}_n^{\mathfrak{D}} \\ \uparrow \mathcal{F} \\ {}^n\mathbb{C}_n^{\mathfrak{D}} \times {}^n\mathbb{C}_n^{\mathfrak{D}} \\ \uparrow \mathcal{J} \\ {}^n\mathbb{C}_n^{\mathfrak{D}} \end{array}$$