

$$\sum_{m=0}^{\infty} \frac{1}{(n+2m)!} \binom{n+2m}{n} \times \left(\begin{array}{c} \text{---} \overleftarrow{\hspace{0.5cm}} \bullet \\ p_1 \\ \vdots \\ \text{---} \overleftarrow{\hspace{0.5cm}} \bullet \\ p_n \end{array} \right) \times n! \times \left(\text{---} \overleftarrow{\hspace{0.5cm}} \bullet \right)^m \times C_m$$