

$$\begin{bmatrix} \alpha \\ n \end{bmatrix} = \prod_i^n \frac{\alpha - i}{n - i} = \frac{\alpha - 0}{n - 0} \cdot \frac{\alpha - 1}{n - 1} \cdots \frac{\alpha + 1 - n}{n + 1 - n}$$

$${}^{1+x}\mathcal{X}=\sum_{n>0}\frac{x^n}{n}$$

$$\widehat{1-x}^\alpha=\sum_n^{\mathbb{N}}\begin{bmatrix} \alpha \\ n \end{bmatrix}x^n$$

$$\widehat{1-x}^{-1}=\sum_n^{\mathbb{N}}x^n$$

$${}^x\chi=\sum_n^{\mathbb{N}}\frac{-1}{2n+1}x^n$$

$${}^x\mathfrak{s}=\sum_n^{\mathbb{N}}\frac{-1}{2n+1}x^n$$