

$$\binom{n}{k} = \frac{n!}{k!(n-k)!}, \quad (1.3)$$

$$\binom{n+1}{k} = \binom{n}{k-1} + \binom{n}{k}, \quad (2.3)$$

$$(a+b)^n = \binom{n}{0}a^n + \binom{n}{1}a^{n-1}b + \dots + \binom{n}{n}b^n. \quad (3.3)$$

$$\binom{n}{k}$$