

1 Binomial distribution

$$X \sim (n, p)$$

1.1 Conditions for binomial distribution

- n repeated trials
- independent trials
- two outcomes
- P is a constant

1.2 Convert $\geq p$ to $\leq 1 - p$

$$X \sim (n, p)$$

$$Y \sim (n, 1 - p)$$

$$P(X \geq a) = P(Y \leq n - a)$$