Probability Distribution – Discrete Variable – Formula Sheet

$$P(x) = \frac{1}{n}$$

$$E(X) = x_1 P(x_1) + x_2 P(x_2) + \ldots + x_n P(x_n)$$

$$P(x) = {}_nC_r \; p^x \; q^{n-x} \qquad E(X) = n\,p$$

$$P(x) = q^x \, p \qquad E(X) = \frac{q}{p}$$

$$P(x) = \frac{{}_aC_x \times {}_{n-a}C_{r-x}}{{}_nC_r} \qquad E(X) = \frac{ra}{n}$$