

$$\textcircled{5} P(X > x_i^*) = P(X = x_i^*) + P(X > x_i^*)$$

$$P(X > x_i^*) + P(X = x_i^*) = 1$$

$$P(X \geq x_i^*) = 1 - P(X = x_i^*)$$

$$= \underline{1 - F_X(x_i^*)}$$

$$\textcircled{6} P(x_i^* \leq X \leq x_j^*) = F_X(x_j^*) - F_X(x_{i-1}^*)$$

$$\textcircled{7} P(x_i^* \leq X < x_j^*) = F_X(x_{j-1}^*) - F_X(x_{i-1}^*)$$

$$\textcircled{8} P(x_i^* < X \leq x_j^*) = F_X(x_j^*) - F_X(x_i^*)$$

$$\textcircled{9} P(x_i^* < X < x_j^*) = F_X(x_{j-1}^*) - F_X(x_i^*)$$