

Q 3.4 given

$$X_1 = 0 \quad P(Y \leq 0.5)?$$

Since $P(Y \leq y) = F_Y(y)$ need to be evaluated

$$F_Y(y) = \underbrace{P(X_1 \leq x)}_{\substack{0 \text{ due} \\ \text{to } X_1 = 0}} P(X_2 \leq x) P(X_3 \leq x)$$

$$F_Y(y) = 0 \quad \text{everywhere!}$$

$$\therefore P(Y \leq 0.5) \text{ given } X_1 = 0 \text{ is } 0$$