Variable Discreta

Función de Probabilidad

$$F(x) = P(X \leq x)$$

$$F(x) = \int_{-\infty}^{x} f(t)\,dt$$

$$E[X] = \sum_{i=1}^{r} x_i\, p(x_i)$$

$$P(x_i) = P(X \leq x_i)$$

$$E[g(x)] = \sum_{i=1}^{r} g(x_i) \cdot p(x_i)$$

$$X : E \longrightarrow P$$

Variable continua

Función de densidad

$$f(x) = F'(x)$$

$$E[X] = \int_{-\infty}^{\infty} x\, f(x)\,dx$$

$$E[g(x)] = \int_{-\infty}^{\infty} g(x) f(x)\,dx$$

$$F : R \longrightarrow [0,1] \quad F(x) = P(X \leq x)$$

(entre 0 y 1)

(X: variable aleatoria)

$$Var[X] = E[X - E[X]]^2 = E[X^2] - E[X]^2.$$