

Distribuciones Discretas Importantes

Poisson(λ): $P(x) = \frac{e^{-\lambda}\lambda^x}{x!}, \lambda > 0$ $R_X = \{0, 1, 2, \dots\}$.

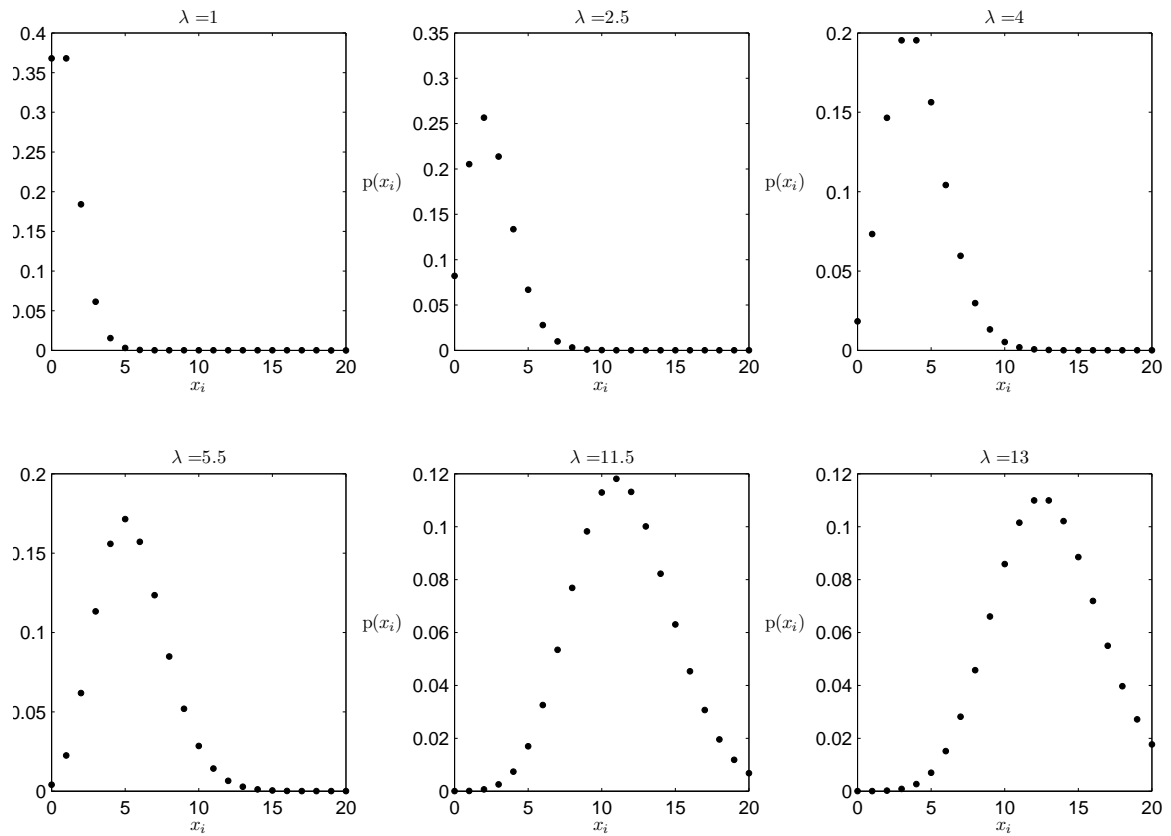
Binomial $B(n, p)$: $P(x) = \binom{n}{x} p^x (1-p)^{n-x}$ $R_X = \{0, 1, 2, \dots, n\}$.

Binomial Negativa $BN(k, p)$: $P(x) = \binom{x-1}{k-1} p^k (1-p)^{x-k}$ $R_X = \{x \in \mathbb{N} : k \leq x\}$.

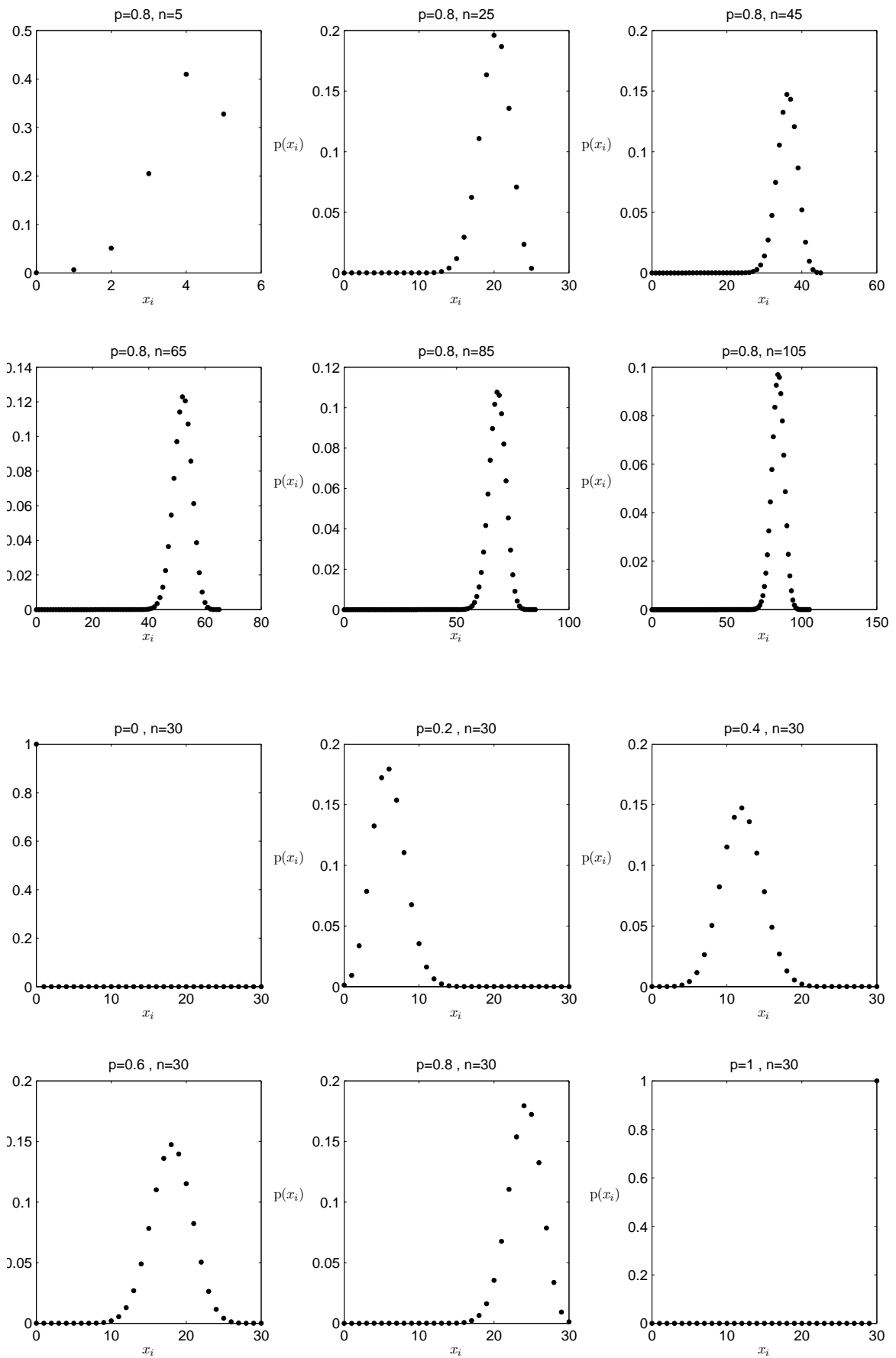
Geométrica $G(p) = BN(1, p)$: $P(x) = p(1-p)^{x-1}$ $R_X = \{1, 2, 3, \dots\}$.

Hiper Geométrica $HG(N+B, N, n)$: $P(x) = \frac{\binom{N}{x} \binom{B}{n-x}}{\binom{N+B}{n}}$ $R_X = \{x \in \mathbb{N} : \max\{0, n-B\} \leq x \leq \min\{n, N\}\}$.

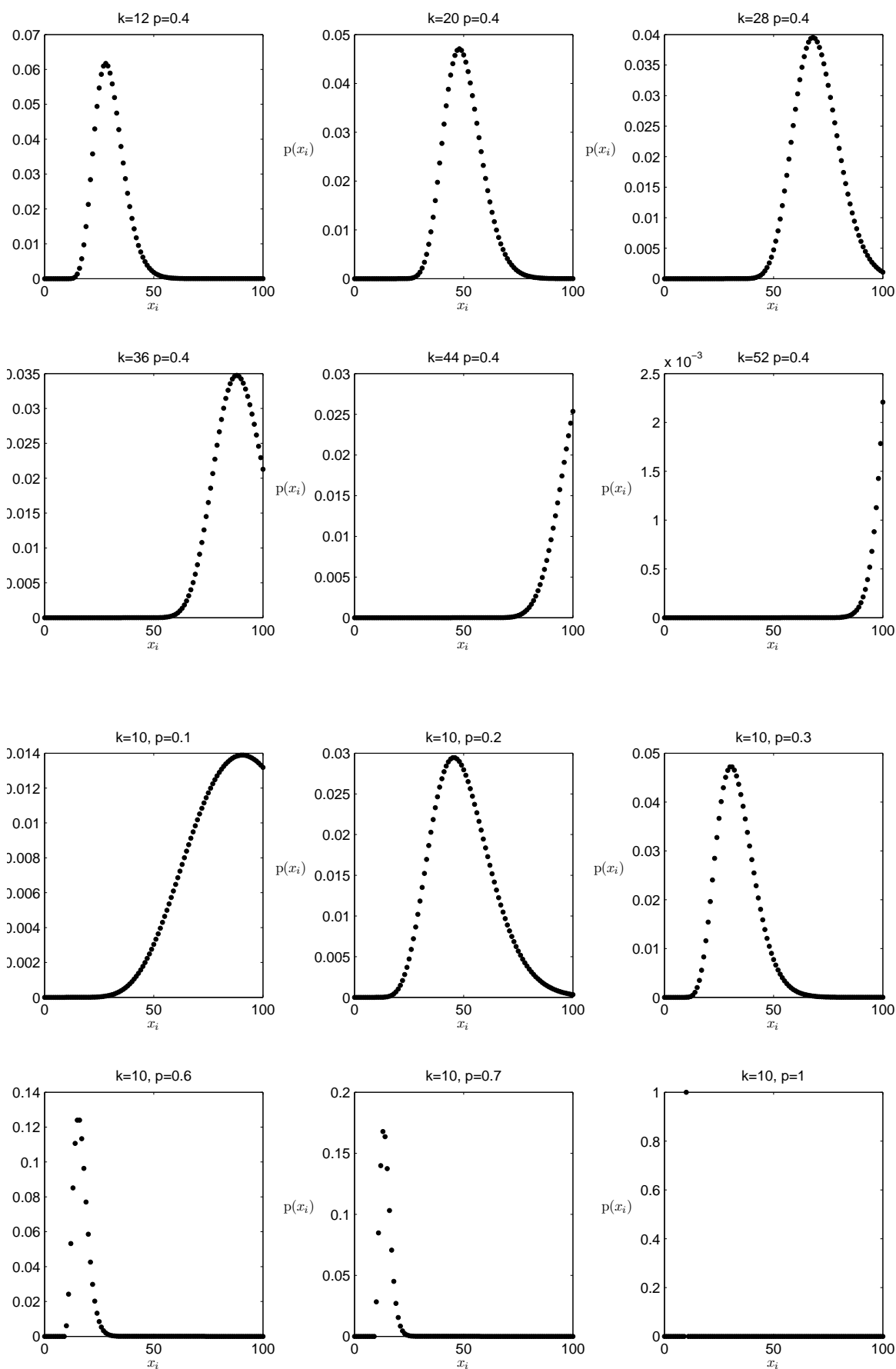
Distribución de Poisson $P(\lambda)$



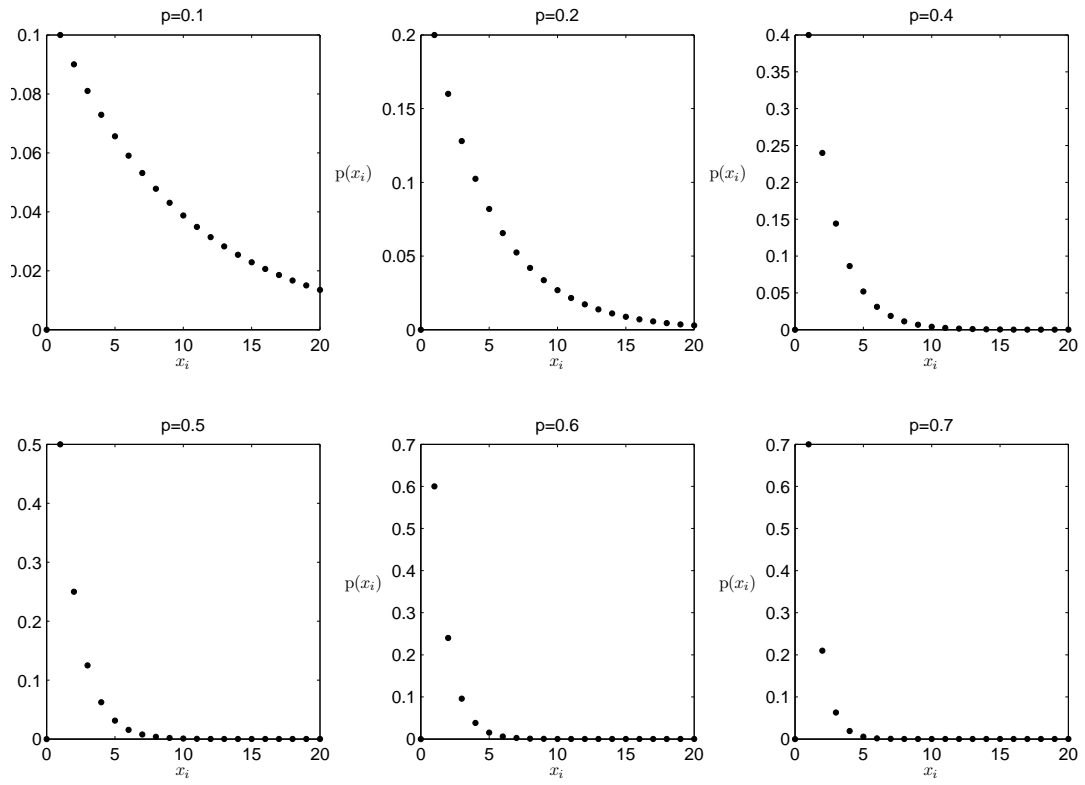
Distribución Binomial: $B(n, p)$



Distribución Binomial Negativa: $BN(k, p)$



Distribución Geométrica $G(p)$



Distribución Hiper Geométrica $HG(N + B, N, n)$

