

Probabilité : Résumé ( site : maths-inter )

|   |  |   |
|---|--|---|
| Espérance – Variance – Ecart type   | $p(A) = \frac{\text{Card}A}{\text{Card}\Omega}$          | Loi Binomiale   |
| $E(X) = \sum_{i=1}^{i=n} x_i p(x_i)$  | $p(\phi) = 0 ; p(\Omega) = 1$<br>$p(A) = 1 - p(\bar{A})$ | $p(X = k) = C_n^k p^k (1 - p)^{n-k}$<br>$E(X) = n.p$<br>$\text{Var}(X) = n.p.(1 - p)$<br>$\sigma(X) = \sqrt{n.p.(1 - p)}$ |
| $\text{Var}(X) = \sum_{i=1}^{i=n} [x_i - E(x)]^2 p(x_i) = \sum_{i=1}^{i=n} x_i^2 p(x_i) - E(x)^2 = E(x^2) - E(x)^2$ |  |   |
| $\sigma(X) = \sqrt{\text{Var}(X)}$  | Probabilité conditionnelle                               |   |
| $p(A \cap E) = p(E) \times p(A/E)$  | $p(A/E) = \frac{p(A \cap E)}{p(E)}$                      | $p(A \cap E) = p(E) \times p(A/E)$  |

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