

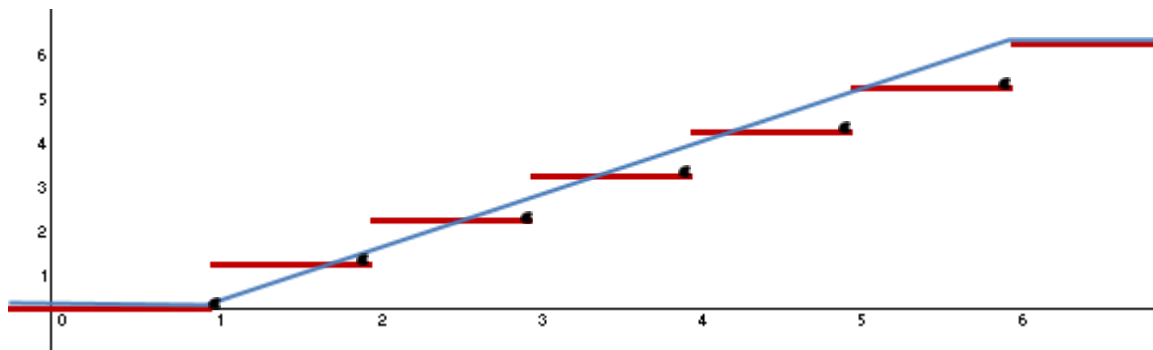
Loi de Probabilité de lancement d'un dé équilibré

| $x=k$    | 1     | 2     | 3     | 4     | 5     | 6     |
|----------|-------|-------|-------|-------|-------|-------|
| $P(x=k)$ | $1/6$ | $1/6$ | $1/6$ | $1/6$ | $1/6$ | $1/6$ |

$$P(E) = \text{Card}(E) / \text{Card}(O)$$

$$E_1 = \{1; 2\} \Rightarrow p(E_1) = 1/6 + 1/6 = 2/6 = 1/3$$

$$E_2 = \{1; 2; 3\} \Rightarrow p(E_2) = 1/6 + 1/6 + 1/6 = 3/6 = 1/2$$



$$E(x) = \sum (k \cdot p_k) = 1/6 + 2/6 + 3/6 + 4/6 + 5/6 + 6/6 = 3.5 \quad \text{REMARQUE: } \sum k = n(n+1)/2$$

$$\text{Var}(X) = \sum \{p_k \cdot [k - E(x)]^2\} = 1/6 [1 - 3.5 + 2 - 3.5 + 3 - 3.5 + 4 - 3.5 + 5 - 3.5 + 6 - 3.5] = 35/12$$

$$\text{Aussi } \text{Var}(x) = \sum \{p_k \cdot k^2 - [E(x)]^2\} = 35/12$$

Pour continues

Intégrale à la place de sigma

$$F(x) = 1/(b-a) \text{ pour l'intervalle } [a,b]$$