

ex

$$X \sim \mathcal{U}_{[1,5]}$$

$$f_x: x \rightarrow \begin{cases} \frac{1}{4} & \text{si } x \in [1,5] \\ 0 & \text{ailleurs.} \end{cases}$$

$$\bullet P(X \geq 3) = \int_3^{+\infty} f_x(x) dx = \int_3^5 \frac{1}{4} dx + \int_5^{+\infty} 0 dx$$

$$= \frac{1}{4} [x]_3^5 = \frac{5-3}{4} = \frac{1}{2}$$

$$\bullet P(3 < X < 7) = \int_3^7 \frac{1}{4} dx$$

$$= \int_3^5 \frac{1}{4} dx + \int_5^7 0 dx = \frac{1}{2}$$