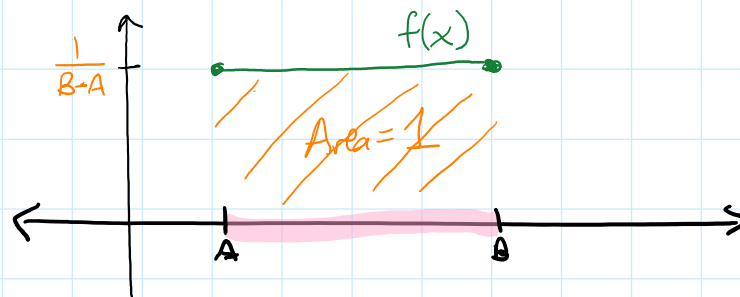


CONTINUOUS RANDOM VARIABLES

pdf: $f(x)$ such that $P(a \leq X \leq b) = \int_a^b f(x) dx$
 ↳ analogous to the pmf

cdf: $F(x)$ such that $P(X \leq b) = F(b) = \int_{-\infty}^b f(x) dx$

uniform distribution: $f(x) = \frac{1}{B-A}$ for $B \leq x \leq A$



$$X \sim \text{Unif}(A, B)$$

percentile: For $p \in [0, 1]$, the $(100p)^{\text{th}}$ percentile is the value η_p such that $P(X \leq \eta_p) = p$. Equivalently, $p = \int_{-\infty}^{\eta_p} f(x) dx$.

confusing in the text