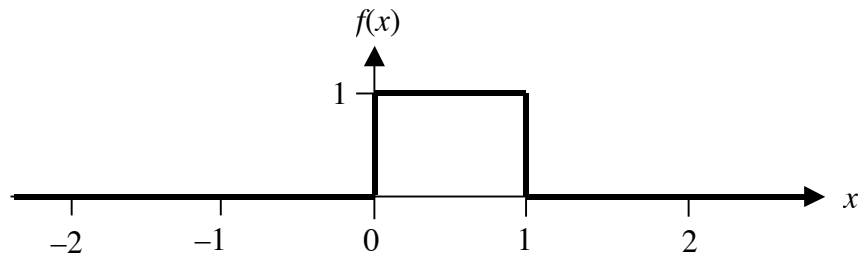**NOT'N:** $X \sim u(0, 1) \equiv X$ has a uniform distribution on the interval $(0, 1)$

DEF: $X \sim u(0, 1) \equiv f(x) = \begin{cases} 1 & 0 \le x \le 1 \\ 0 & \text{otherwise} \end{cases}$

> **NOTE:** $\mu = \dfrac{1}{2}, \; \sigma^2 = \dfrac{1}{12}$

PICT:

NOT'N: $X \sim u(a, b) \equiv X$ has a uniform distribution on the interval (a, b)

DEF: $X \sim u(a, b) \equiv f(x) = \begin{cases} \dfrac{1}{b-a} & a \le x \le b \\[2mm] 0 & \text{otherwise} \end{cases}$

> **NOTE:** $\mu = \dfrac{a+b}{2}, \; \sigma^2 = \dfrac{(b-a)^2}{12}$

> **NOTE:**   If $X \sim u(0, 1)$ and $Y = \dfrac{a+b-1}{2} + (b-a)X$, then $Y \sim u(a, b)$.

PICT: