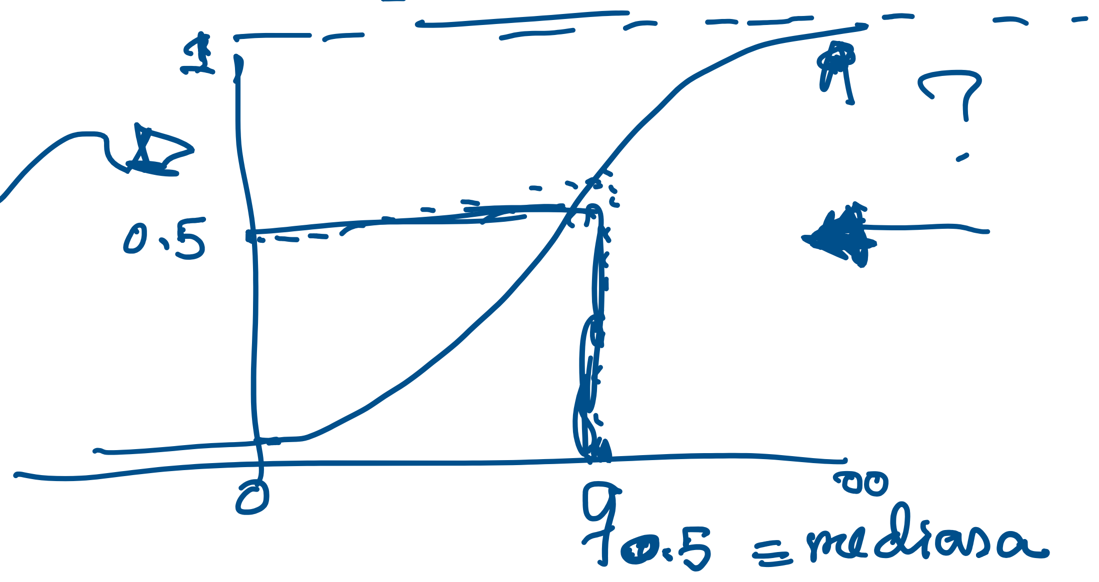
Wednesday, 14 August 2024 10:55 a.m.

MEDIDAS DE CENTRALIDAD

- $\mu = E[X]$; mediana $= m = \int_{-\infty}^{m?} f(x)\,dx = \frac{1}{2}$

  "$F(x)$"

  moda $= \max_x f(x)$



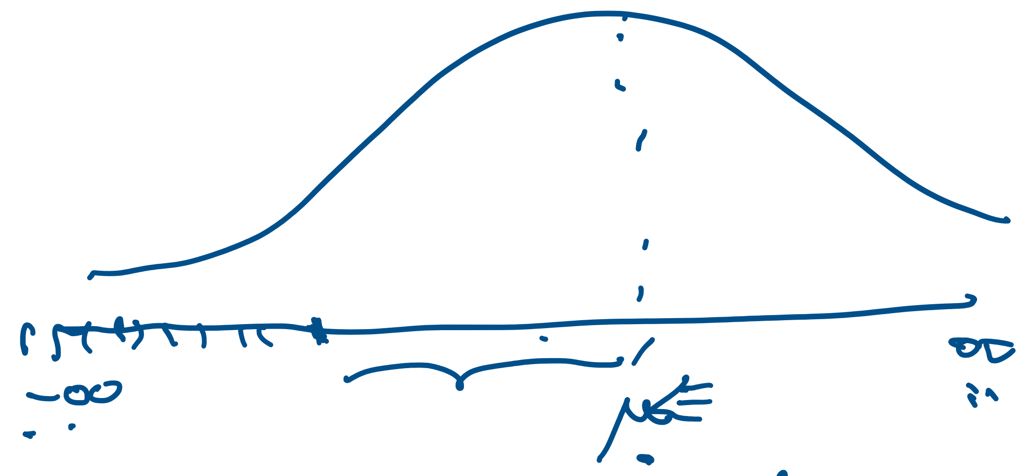
- OBS. MUESTRALES
  - indep.
  - idénticamente distribuidos

  → Uniforme Discreta

  $\frac{1}{n}\sum_{i=1}^{n} x_i$

VARIABILIDAD

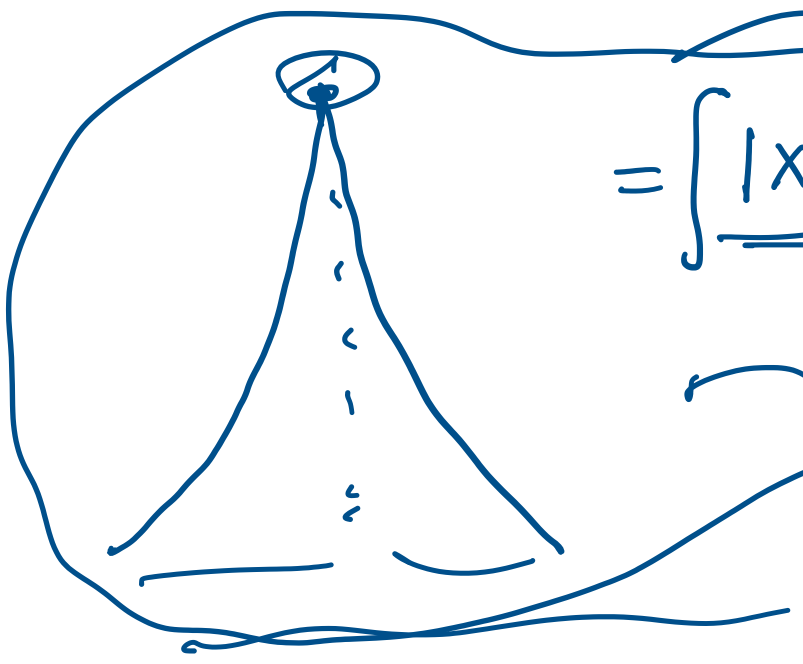
$$Var = E\underbrace{(X-\mu)}_{\text{distancia}}^2$$



$$E(X-\mu) = 0$$

$$E(X) - E(\mu) = \mu - \mu$$

$E|X-\mu|$; $E(X-\mu)^2$



$= \int |x-\mu|\, \underbrace{f(x)\,dx}_{dF(x)}$; $\int (x-\mu)^2 \underbrace{f(x)\,dx}_{dF(x)} = Var(X) = \sigma^2$

$$\min_a E(X-a)^2 = \min_a \left(E(X_i^2) - 2aE(X) + a^2 \right)$$

$$\frac{d(\quad)}{da} = -2E(X) + 2a = 0$$

$$\Rightarrow a = \mu$$

$\bar{X} \pm (10 \text{ pesos})$

pesos

$\sigma^2 = Var(X)$

$\boxed{\sigma = \text{Desv. Estándar}}$