$X \sim exp(1)$

$\mu\left(1 - \beta \log\left(\frac{X}{\beta}\right)\right) = Y \quad Y \sim Gumbel(\mu, \beta)$

$\uparrow$

weibull

$\mu - \beta \log(X) = Y \quad \sim Gumbel(\mu, \beta)$

$\underbrace{X = e^{\frac{\mu - Y}{\beta}}}$ $\quad exp(1) \quad F(x) = 1 - e^{-x}$

// ——— // ——— // ——— // ——— // ——— //

$W \sim \chi^2_{(K)}$

$$\underbrace{f_W(w|K) = \frac{1}{2^{K/2}\Gamma(K/2)} w^{K/2-1} e^{-w/2}}$$

$T = 2X \qquad f_T(t|\theta) = f_X(t|\lambda=1) \cdot |j|$

$\frac{T}{2} = X \rightarrow j = \frac{1}{2} \qquad f_T(t|\theta) = e^{-t/2} \cdot \frac{1}{2} = \left(\frac{1}{2}\right) e^{-t/2}$

$T \sim exp(\lambda = 2)$ $\nearrow$

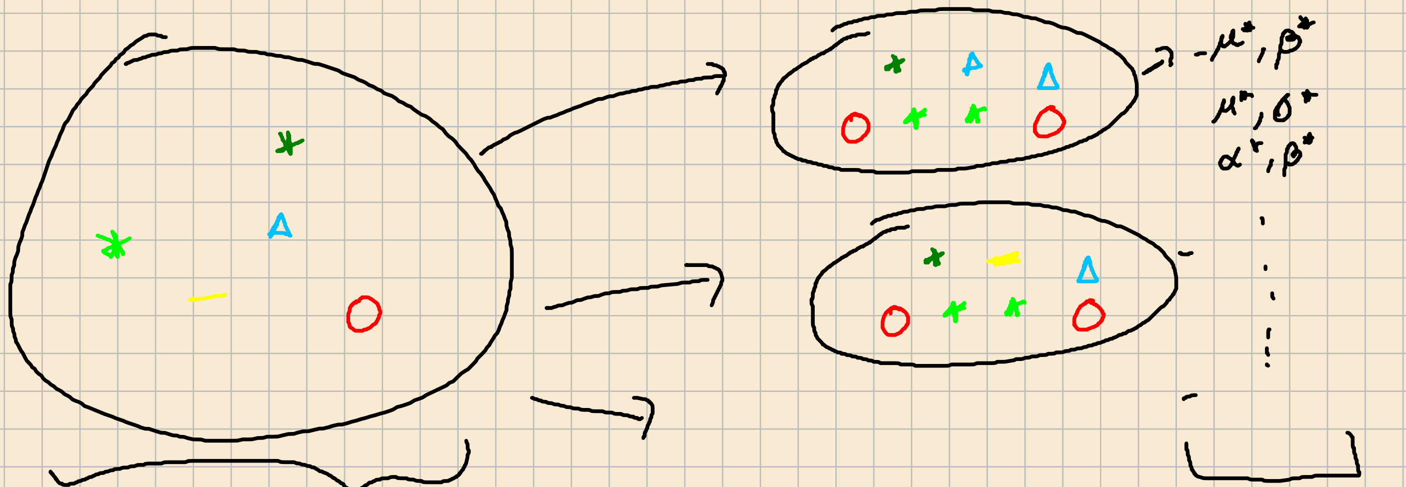
$f_T(t|\lambda=2) = \underbrace{\frac{1}{2}}\underbrace{e^{-t/2}}$ $\quad \Big| \quad f_W(w|K) = \frac{1}{2^{K/2} \cdot \Gamma(K/2)} w^{\overset{1}{\frac{K}{2}}-1} e^{-w/2}$

$K = 2$

$$f_W(w|K=2) = \frac{1}{2^{2/2}\,\Gamma(2/2)} w^{\overset{0}{\frac{2}{2}-1}} e^{-w/2}$$

1 $\qquad$ 1 $\qquad \rightarrow 0!$ 1

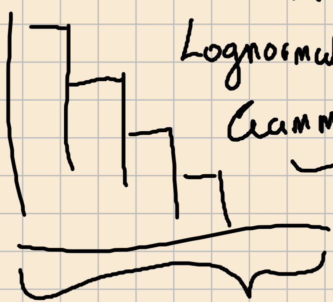
$$f_W(w|K=2) = \frac{1}{2} e^{-w/2}$$



$\text{Gumbel}(\hat{\mu}, \hat{\beta})$ $\quad Var[\mu^*, \beta^*]$ $\quad \Theta^* = E[\mu^*, \beta^*]$

$\text{Lognormal}(\hat{\mu}, \hat{\sigma})$ $\quad Cov[\mu^*, \beta^*]$ $\quad E[\mu^*, \sigma^*]$

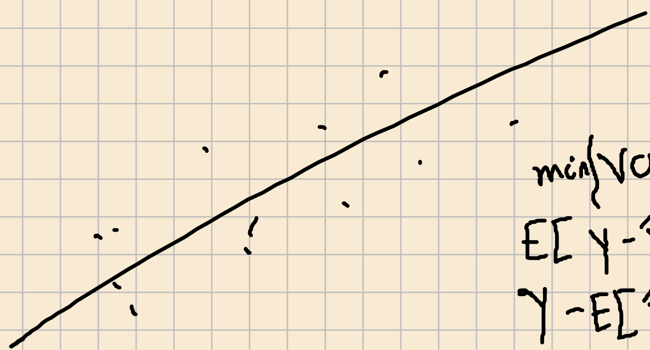
$\text{Gamma}(\hat{\alpha}, \hat{\beta})$ $\quad 2\times 2$ $\quad E[\alpha^*, \beta^*]$



$\hat{\Theta} = \text{Real}$

$$\underbrace{\left\{ \underbrace{Tr(Cov[\mu^*, \beta^*])}_{\sqcap\ Var[X]} + \underbrace{\|\hat{\Theta} - \Theta^*\|^2}_{\sqcap\ BIAS} \right.}_{} \quad - \underbrace{MSE}$$

$$E[\Omega] \to \begin{cases} E[\Omega_1] \\ E[\Omega_2] \\ \vdots \end{cases}^{m} \quad E[E[\,]\ldots] = \Omega$$



$\min\{Var\}$ $\quad Y \sim Normal(\mu_i, \sigma^2)$

$E[Y - \hat{Y}] = 0$

$Y - E[\hat{Y}] = 0$

MC MC

Integracción monte carlos

$X \sim f(\cdot)$ $\quad N(\mu, 1)$

$x^{(1)} = x_1, x_2, \ldots, x_n$

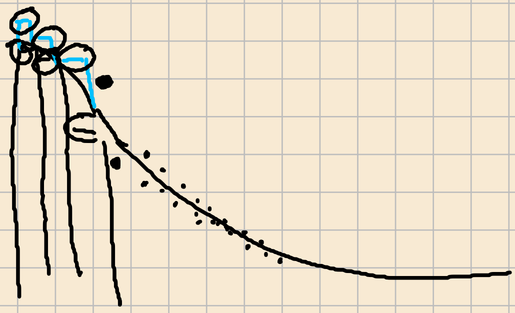
$\vdots$

$x^{(2)} = x \ldots\ldots$

$\ldots\ldots$

$[\,*\quad]$

append($*$)



$x > 0$

$$f^{x}(t) = \underbrace{\int \dots \underbrace{dt}_{f\ \text{densidad}}}$$

$$m(t) = \underbrace{E[e^{tX}]}$$

unof$(0,1) \to$ Beta$(1,1)$

$$T = \Sigma (X)^2$$

$\hookrightarrow \geq 0$

$\chi^2_{(n)}$

$$\underbrace{P(\chi^2_{(n)} \geq S^2)}$$

$\updownarrow$

[illegible]

$T \sim$ Gumbel $\to \downarrow \to \chi^2_{(2)}$

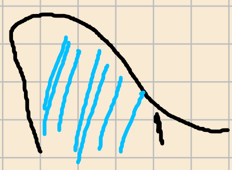
$\uparrow$

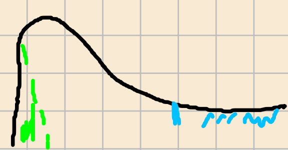
ST

$$P(\chi^2_{(2)} \geq ST)$$

$T \to$

$ST \swarrow$





m. a. $X \sim C(\cdot,\cdot)$

MO

$X \mid MO$

$Y \sim C_{MO}(\cdot,\cdot)$

T_c T

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$P(T \geq T_c) = 0$