

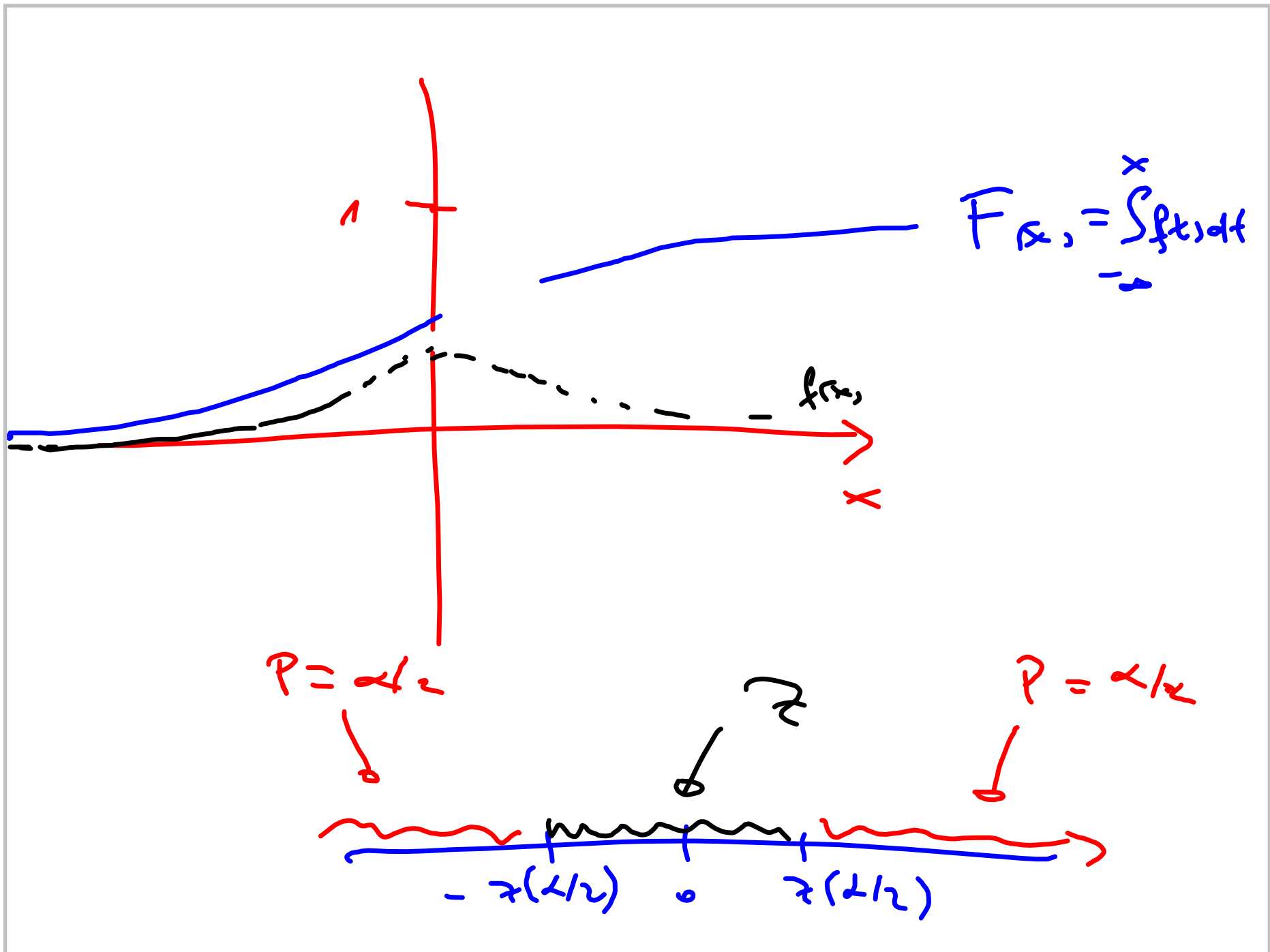
$$P(X \leq a) = \int_{-\infty}^a f(x) dx = F(x)$$

N ... počet jednotek v populaci

w_i , $i = 1, \dots, N$

$X \equiv N(\mu, \sigma^2)$

$\rightarrow Z \equiv N(0, 1)$



$$X \approx N(\mu, \sigma)$$

Diagram illustrating the parameters of a normal distribution:

- μ (mean) is circled in blue.
- σ (standard deviation) is circled in red.
- Arrows point from the words "mean" and "standard deviation" to their respective symbols.

$\varepsilon > 0$ zvolíme ľubovoľne.

Čebyšev nerovnosť:

$$P(|X - EX| \geq \varepsilon) \leq \frac{\text{var } X}{\varepsilon^2}$$

Dk. $\text{var } X = \int_{-\infty}^{\infty} (x - \mu)^2 f(x) dx$

$$= \int_{|x - \mu| \geq \varepsilon} (x - \mu)^2 f(x) dx + \int_{|x - \mu| < \varepsilon} (x - \mu)^2 f(x) dx$$

$$\geq \int_{|x - \mu| \geq \varepsilon} \varepsilon^2 f(x) dx = \varepsilon^2 P(|X - \mu| \geq \varepsilon)$$

$$\Rightarrow P(|T_n - ET_n| < \varepsilon/2) \geq 1 - \frac{\text{var } T_n}{(\varepsilon/2)^2} \rightarrow 0$$

e zároveň pre veľké $n > n_0$

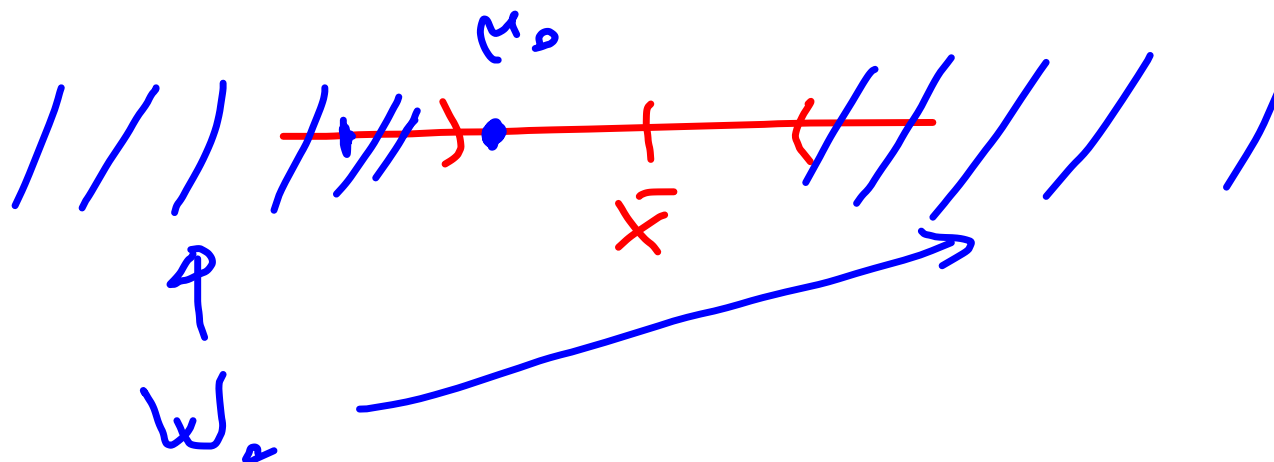
$$P(|T_n - \theta| < \varepsilon) \geq P(|T_n - ET_n| < \varepsilon/2, |ET_n - \theta| < \varepsilon/2)$$

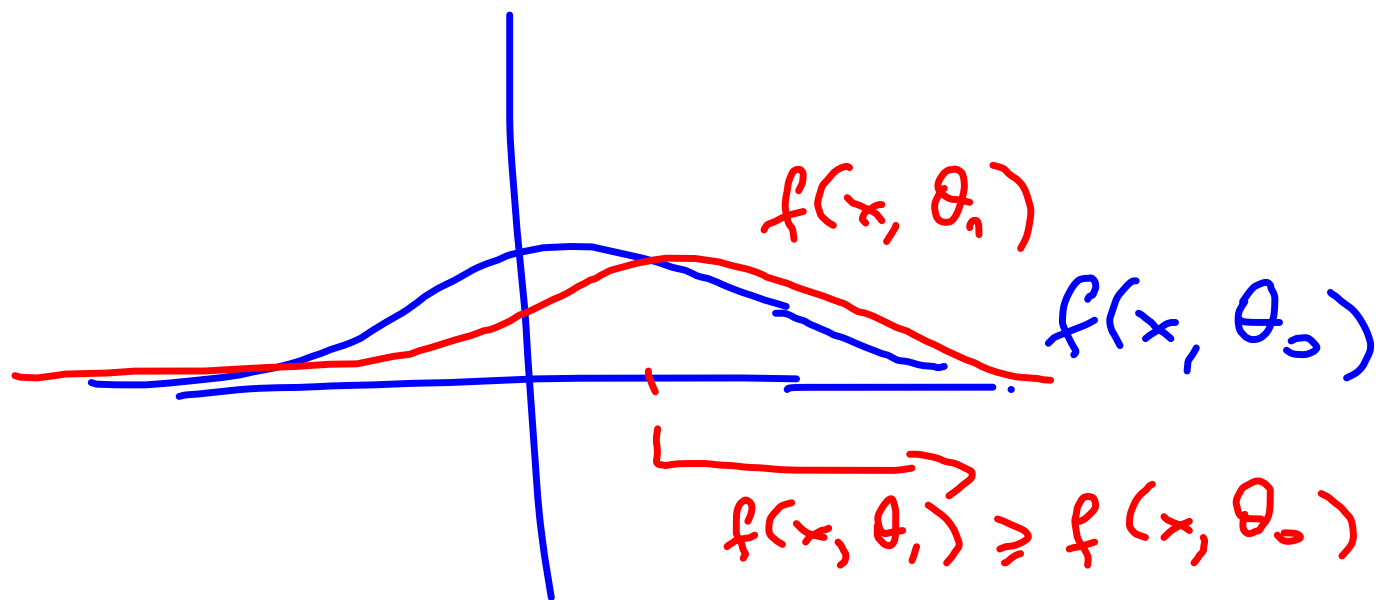
$$= P(|T_n - ET_n| < \varepsilon/2)$$

pre fix $n_0 > n_0$



Korrespondenz	Korrespondenz	
	H_0 Kett	H_0 Kett
zusätzlich H_0	dyke 1. dyke	-
zusätzlich H_0 =	-	dyke 2. dyke





W, W_c :

$$W = (W - W_c) \cup (W \cap W_c)$$

$$W_c = \underline{(W_c - W)} \cup \underline{(W \cap W_c)}$$

disjunkční!

$$\Delta := \int_{W_c} f(x, \theta_1) - \int_W f(x, \theta_1)$$

$$= \int_{W_c - W} f(x, \theta_1) + \int_{W \cap W_c} f(x, \theta_1) - \int_{W \cap W_c} f(x, \theta_1) - \int_{W - W_c} f(x, \theta_1)$$

$$\cong \int_{\cancel{W_c - W}}^{\cancel{W_c}} f(x, \theta_0) - \int_{\cancel{W \cap W_c}}^{\cancel{W}} f(x, \theta_0) = c(\alpha - \alpha) = 0$$