(T1) задача 1

$F \sim R(0, \theta)$, $\hat{\theta}_3 = \max x_i$

$\forall \theta \in \Theta \hookrightarrow \hat{\theta}_3 \xrightarrow{P} \theta$ ?

$$P(|\max x_i - \theta| \geq \varepsilon) = P(\max x_i \geq \theta + \varepsilon) +$$

$$+ P(\max x_i \leq \theta - \varepsilon) = 1 - \underbrace{P(\max x_i < \theta + \varepsilon)}_{(F(\theta+\varepsilon))^n = 1} +$$

$$+ \underbrace{P(\max x_i < \theta - \varepsilon)}_{(F(\theta-\varepsilon))^n = \left(1 - \frac{\varepsilon}{\theta}\right)^n \xrightarrow[n \to \infty]{} 0} + \underbrace{P(\max x_i = \theta - \varepsilon)}_{= 0} \to$$

$$\xrightarrow[n \to \infty]{} 0 \Rightarrow \hat{\theta}_3 \xrightarrow{P} \theta \Rightarrow \text{сост.}$$