

Т1) доказок!

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

$$\forall \theta \in \Theta \xrightarrow{\tilde{\theta}_3} \theta ?$$

$$\begin{aligned} P(|\max x_i - \theta| \geq \varepsilon) &= P(\max x_i \geq \theta + \varepsilon) + \\ &+ P(\max x_i \leq \theta - \varepsilon) = 1 - \underbrace{P(\max x_i < \theta + \varepsilon)}_{(F(\theta + \varepsilon))^n \rightarrow 1} + \\ &+ \underbrace{P(\max x_i < \theta - \varepsilon)}_{(F(\theta - \varepsilon))^n = (1 - \frac{\varepsilon}{\theta})^n \xrightarrow{n \rightarrow \infty} 0} + \underbrace{P(\max x_i = \theta - \varepsilon)}_{= 0} \rightarrow 0 \end{aligned}$$

$$\xrightarrow{n \rightarrow \infty} 0 \Rightarrow \tilde{\theta}_3 \xrightarrow{P} \theta \Rightarrow \text{сост.}$$