T1

$$\tilde{\theta}_3' = \frac{n+1}{n}\, x_{max}$$

$$\forall \theta > 0 \quad \forall \varepsilon \quad P\left(|\tilde{\theta}_3' - \theta| \geq \varepsilon\right) \xrightarrow[n \to \infty]{} 0 \ ?$$

$$P\left(\left|\frac{n+1}{n} x_{max} - \theta\right| \geq \varepsilon\right) = P\left(x_{max} > \frac{(\theta+\varepsilon)n}{n+1}\right) +$$

$$+ P\left(x_{max} < \frac{(\theta-\varepsilon)n}{n+1}\right) + \underbrace{P\left(x_{max} = \frac{(\theta+\varepsilon)n}{n+1}\right)}_{=0} =$$

$$= 1 - \Big(\underbrace{F\Big(\frac{(\theta+\varepsilon)n}{n+1}\Big)}_{1}\Big)^n + \Big(\underbrace{F\Big(\frac{(\theta-\varepsilon)n}{n+1}\Big)}_{2}\Big)^n \xrightarrow[n \to \infty]{} 0$$

① $\xrightarrow[n\to\infty]{} 1$

② $= \left(\frac{n}{n+1}\left(1-\frac{\theta}{\varepsilon}\right)\right)^n \xrightarrow[n\to\infty]{} 0$

$\forall \theta > 0 \quad \forall \varepsilon \quad P(|\theta_3^{2\,\prime} - \theta| \geq \varepsilon) \xrightarrow[n\to\infty]{} 0 \Rightarrow$

$\Rightarrow \theta_3^{2\,\prime}$ – сост.