STATISTIKA 15.2.2012

1) $f_T(t) = a\,t\,(t-1) \qquad 0 \le t \le 1$

• DOLOČITEV a: $\int_0^1 a\,t\,(t-1)\,dt = 1 \rightarrow \int_0^1 a\,(t^2-t)\,dt = a\left(\frac{t^3}{3} - \frac{t^2}{2}\right)\Big|_0^1 = a\left(\frac{1}{3} - \frac{1}{2}\right)$

$a\left(-\frac{1}{6}\right) = 1 \Rightarrow \underline{a = -6}$

• ZALOGA VREDNOSTI $V_n \rightarrow$ ENAKA KOT ZALOGA VREDNOSTI T

$\underline{V_n: \; 0 \le v \le 1}$

• DOLOČITE $f_{V_n}(v)$:

$$F_T(t) = \int_0^t -6\,(\tilde{t}^2 - \tilde{t})\,d\tilde{t} = -6\left(\frac{\tilde{t}^3}{3} - \frac{\tilde{t}^2}{2}\right)\Big|_0^t = 3t^2 - 2t^3 \qquad 0 \le t \le 1$$

$$f_{V_n}(v) = n\,(1 - F_T(v))^{n-1}\,f_T(v)$$

$$\underline{f_{V_n}(v) = n\,(1 - 3t^2 + 2t^3)^{n-1}\,6\,(t - t^2)}$$