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1.

$$\lambda = \frac{-n}{\sum_{i=1}^n \ln x_i}$$

2.

$$n \geq 97$$

3.

$$\bar{x} = 25, \hat{s}^2 = 8.667, \bar{x} \in \langle 24.17, 25.83 \rangle, \hat{s} \in \langle 0, 11.784 \rangle$$

4.

$$\textbf{a)} \langle 0.0102, 0.846 \rangle \quad \textbf{b)} } n \geq 280$$

5.

$$\hat{t} = 3.227, \quad t_{1-\alpha/2} = 2.66, \quad H_0 \text{ se ne prihvća}$$

6.

$$\chi_q^2 = 8.5, \quad \alpha = 0.10$$

7.

$$\textbf{a)} } p_i = \frac{1}{5}, i = 1, 2, \dots, 5; E(X) = 3$$

$$\textbf{b)} } p_i = \left(\frac{4}{5}\right)^{i-1} \frac{1}{5}, i = 1, 2, \dots; E(X) = 5$$

8.

$$g(y) = \begin{cases} \frac{1}{4}, & y \in \langle 0, 1 \rangle \\ \frac{y}{8} + \frac{1}{8}, & y \in \langle 1, 3 \rangle \end{cases}$$

9.

$$C = 1; f_X(x) = 2x, x \in \langle 0, 1 \rangle; f_Y(y) = \frac{1}{2}, y \in \langle 0, 2 \rangle; P\{X < Y\} = \frac{2}{3}$$

10.

$$\textbf{a)} } E(Z) = \frac{n}{n+1} (1 - \alpha) \quad \textbf{b)} } \frac{n+1}{n}$$