RJEŠENJA 2. MEĐUISPITA IZ VJEROJATNOSTI I STATISTIKE
08.05.2008.

1.

$$F(x) = 2x - x^2, \;\; x \in [0,1]$$
$$f(x) = 2 - 2x, \;\; x \in [0,1], \quad E(X) = \frac{1}{3}$$

2.

$$g(y) = \begin{cases} e^{-2}\left(e^{y} + e^{-y}\right), & y \in \langle 0, 2] \\ e^{-y-2}, & y \in \langle 2, +\infty \rangle \end{cases}$$

3.

a) $P(X < E(X)) = 1 - e^{-1}$, **b)** $P = 1 - e^{-\frac{1}{3}}$

4.

a) predavanja

b) $P(X > 450) = 0.252$

c) $f_Y(y) = \frac{1}{\sqrt{2\pi}} y^{-\frac{1}{2}} e^{-\frac{1}{2}y}, \quad y \in \langle 0, +\infty \rangle$

5.

$$C = \frac{1}{2\pi}, \;\; f_Y(y) = \frac{1}{\pi}\sqrt{4 - y^2}, \;\; y \in \langle 0, 2\rangle, \quad E(Y) = \frac{8}{3\pi}$$

6.

a) predavanja, **b)** $p = 2\ln 2 - \frac{1}{2}$

7.

$$F_Z(z) = 1 + \frac{e^{-3z} - e^{-z}}{2z}, \quad z \in \langle 0, +\infty \rangle$$
$$p \approx 0.84$$