Rješenja prvog međuispita iz Matematike 3E i 3R
21.10.2010.

1. (2 boda)

$T = \frac{8}{3}$

2. (4 boda)

$f(x) = \frac{2}{\pi} - \frac{4}{\pi} \sum_{n=1}^{\infty} \frac{\cos 2nx}{4n^2-1}$, $\displaystyle\sum_{n=1}^{\infty} \frac{1}{4n^2-1} = \frac{1}{2}$

3. (4 boda)

$f(x) = \frac{2}{\pi} \int\limits_{0}^{\infty} \frac{\sin \lambda\pi \cos \lambda\pi}{\lambda} d\lambda$, $\int\limits_{0}^{\infty} \frac{\sin \lambda\pi}{\lambda} d\lambda = \frac{\pi}{2}$

4. (7 bodova)

a) Ispitati sva 3 svojstva iz definicije.
b) Knjiga
c) Knjiga

5. (4 boda)

$y(t) = \left(2 \cos t + \frac{1}{2} t \sin t\right) u(t)$

6. (4 boda)

$y(t) = \sin(t)u(t) + t \sin(t)u(t) + (t - \pi) \sin(t - \pi)u(t - \pi)$

6. (4 boda) $e(t) = \delta(t)$