

Rješenja školske zadaće za grupu E5

A grupa

1. $f\left(\frac{5}{2}\right) = 2$

2.a) $S(x) = \sum_{n=0}^{\infty} \frac{4}{(2n+1)\pi} \sin(2n+1)x$

b) $\frac{\pi}{4}$

3. a) $F(s) = \frac{3}{s((s+2)^2+9)}$

b) $f(t) = (2e^{-2t} + e^t)u(t)$

B grupa

1. $f\left(\frac{3}{2}\right) = -2$

2. $\tilde{f}(x) = \frac{1}{\pi} \int_0^{\infty} \left(-\frac{2 \cos \lambda}{\lambda} + \frac{2 \sin \lambda}{\lambda^2}\right) \sin \lambda x \, d\lambda$

3. a) $F(s) = \frac{2}{(s+2)^3} + \frac{2}{(s+2)^2} + \frac{1}{s+2}$

b) $f(t) = (2e^{-3t} \cos(\sqrt{3}t) - \frac{5}{\sqrt{3}}e^{-3t} \sin(\sqrt{3}t))u(t)$