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# Seminarski rad iz Numeričke analize

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Ime i prezime

28. maj 2017.

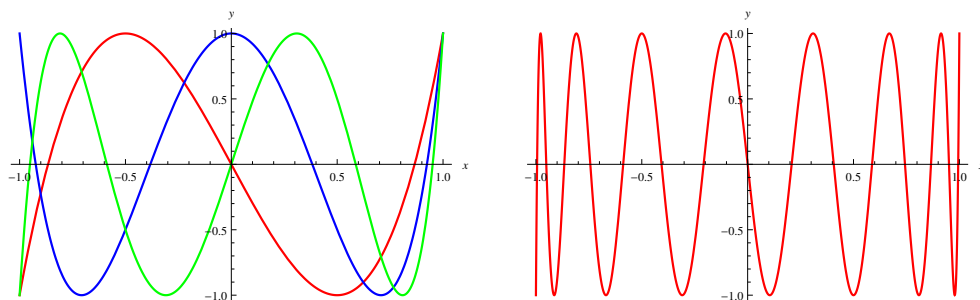
## Zadatak i rješenje

**Zadatak 1.** *Riješiti integral*  $\int_0^1 (\sin x + x^2) dx$ .

**Rješenje:**  
Rješenje je

$$I = \left( -\cos x + \frac{1}{3}x^3 \right) \Big|_0^1 = \dots$$

## Slika



Slika 1: Grafici Čebiševljevih polinoma  $T_3, \dots$

## Tabela

$N$	$E_n$	Ord	$E_n$	Ord	$E_n$	Ord
$2^4$	$1.6229e-02$	2.00	$1.5795e-02$	2.18	$1.9012e-02$	1.99
$2^5$	$4.0644e-03$	2.00	$3.4848e-03$	2.00	$4.7850e-03$	2.01
$2^6$	$1.0165e-03$	2.00	$8.2228e-04$	2.00	$1.1850e-03$	2.07
$2^7$	$2.5416e-04$	2.00	$2.0203e-04$	2.00	$2.8273e-04$	2.18
$2^8$	$6.3542e-05$	2.00	$5.0277e-05$	2.00	$6.2197e-05$	2.19
$2^9$	$1.5886e-05$	2.00	$1.2555e-05$	2.00	$1.3630e-05$	2.03
$2^{10}$	$3.9714e-06$	2.00	$3.1378e-06$	2.00	$3.2129e-06$	2.00
$2^{11}$	$9.9284e-07$	—	$7.8438e-07$	—	$7.8922e-07$	—
$\varepsilon$	$2^{-2}$		$2^{-6}$		$2^{-10}$	

Tablica 1: Greška  $E_N$  i red konvergencije Ord za numerička rješenja

ili malo jednostavnija

$N$	1	2
$x_i$	1	1
$y_i$	1	1

Tablica 2: Jednostavnija tabela

## Unošenje raznih kodova

```
f2[x_] = ((x-1)(x-2)(x-3)(x-4)(x-6)(x-7)(x-8)(x-9))
          /((5-1)(5-2)(5-3)(5-4)(5-6)(5-7)(5-8)(5-9));
f3[x_] = ((x-1)(x-2)(x-3)(x-4)(x-5)(x-7)(x-8)(x-9))
          /((6-1)(6-2)(6-3)(6-4)(6-5)(6-7)(6-8)(6-9));
f4[x_] = ((x-1)(x-3)(x-4)(x-5)(x-6)(x-7)(x-8)(x-9))
          /((2-1)(2-3)(2-4)(2-5)(2-6)(2-7)(2-8)(2-9));
Plot[{f2[x], f3[x], f4[x]}, {x, .95, 9.02},
      AxesLabel -> {x, y},
      AxesOrigin -> {1, 0},
      PlotLegends -> Placed[{"poly 1", "poly 2", "poly 3"}, Below],
      PlotStyle -> {Red, Green, Blue}]
```

ili

```
function upwind(eps,n,x0)
```

```
end
```

## Slova sa kvakicama + đ

šđčēž ŠĐČĆŽ ili š đč é ž Š ĐČ Ć Ž

## Razni jednostavniji primjeri

Pisanje teksta i matematičkih izraza u tekstu: Riješiti jednačinu  $\sin x - \cos x = 0.5$ .

Pisanje matematičkih formula:

$$\sin x = 0.5$$

ili

$$\sin x = 0.5$$

ili

$$\sin x = 0.5 \tag{1}$$

$$\begin{aligned} \sin(x+y) &= \sin x \cos y + \cos x \sin y \\ &= \sin x \cos y + \dots \\ &= \dots \end{aligned} \tag{2}$$

Determinante

$$\begin{vmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{vmatrix} = 45 + \dots \tag{3}$$

Matrice

$$\begin{pmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{pmatrix} = \begin{pmatrix} 1 & 0 & 0 \\ 0 & 5 & 0 \\ 0 & 0 & 9 \end{pmatrix} + \dots \quad (4)$$

Vettori

$$\vec{a} = 3\vec{i} + 4\vec{j} - 5\vec{k} = (3, 4, -5)$$

Sistemi

$$\begin{aligned} x + y + z &= 3 \\ 2x - y + 6z &= 3 \\ -3x - y + z &= 0 \end{aligned}$$