

2.) problemi

$$\vec{s}_1 \in S_2$$

$$\vec{s}_1 = \lambda \cdot \vec{s}_2$$

odak broj

$$\vec{s}_1 = \begin{bmatrix} 3 \\ -2 \\ 1 \end{bmatrix} \quad \vec{s}_2 = \begin{bmatrix} -6 \\ 2\alpha \\ -2 \end{bmatrix}$$

0 broj broj

može biti da deluje?

$$\lambda = (-2)$$

$$-2 \cdot \lambda = 2\alpha$$

$$-2 \cdot (-2) = 2\alpha$$

$$\boxed{\alpha = 2}$$

Primer ispit

Tablica sinusa i kosinusa neka !!! (V predložiti ma)

$$1. \quad 2A^T + \frac{1}{2}X = B \cdot C$$

$$\frac{1}{2}X = B \cdot C - 2A^T$$

Sve rjesiš i odrazi pomnožiš  $\rightarrow 2$  da se deluje X.

2.

$$\left[ \begin{array}{ccc|c} \textcircled{1} & -2 & 1 & -1 \\ 2 & 1 & 0 & -3 \\ -1 & -3 & 1 & -4 \end{array} \right] \begin{array}{l} / \cdot (-2) \\ / \cdot 1 \end{array}$$

$$\rightarrow \left[ \begin{array}{ccc|c} 1 & -2 & 1 & -1 \\ 0 & \textcircled{5} & -2 & -1 \\ 0 & -5 & 2 & -5 \end{array} \right] / : 5$$

$$\left[ \begin{array}{ccc|c} 1 & -2 & 1 & -1 \\ 0 & 1 & -\frac{2}{5} & -\frac{1}{5} \\ 0 & -5 & 2 & -5 \end{array} \right]$$

(Može se pronaći jednadžba s parametrom  $\lambda$ ) !!!



3.

$$\begin{bmatrix} 1 & 0 & -1 & 0 & 0 & 0 \\ 2 & 1 & 2 & 0 & 1 & 0 \\ 2 & 1 & 0 & 0 & 0 & 1 \end{bmatrix}$$

metoda Gauss

4.

$$\begin{bmatrix} 2 & 1 & 3 & 0 \\ 0 & -1 & -1 & 1 \\ 2 & 1 & -2 & 0 \\ 1 & -2 & 1 & 2 \end{bmatrix}$$

Ubesto je unjeh luter 4x4  
matrica, dake Laplace rasvoj  
unje.

5.

$$A \cdot X + B \cdot X = 2I$$

$$(A+B)^{-1} \cdot (A+B) \cdot X = 2I$$

$$X = (A+B)^{-1} \cdot 2I$$

$$X = 2 \cdot (A+B)^{-1}$$

izlučivanje

$$A+B = \begin{vmatrix} 1 & -2 \\ 2 & 1 \end{vmatrix} = \begin{vmatrix} 2 & -1 \\ -1 & 3 \end{vmatrix}$$

$$A+B = \begin{vmatrix} 3 & -3 \\ 1 & 4 \end{vmatrix}$$

$$(A+B)^{-1} = \frac{1}{A+B} \dots$$

6.

a)  $\vec{B} = \begin{bmatrix} -1 \\ 1 \\ -3 \end{bmatrix}$  ...

c) i d)  
jedan način  
drug 4. metoda.

4. je teri !!!  
idud

~ Koliko je luter izmedu  
nultom? (Moze do  
jevo pitanje tu)

- 2. Metoda
- 2. Gauss
- 1. Determinante  
i Matrica...

Iskuci m 3. metoda



4. "redud"

1.

2.

$R=3$   $S(0,0)$  pismo  $\begin{bmatrix} 3 \cos t \\ 3 \sin t \end{bmatrix}$   $r' = r + t$

$\begin{bmatrix} 9 + 3 \cos t \\ -1 + 3 \sin t \end{bmatrix}$

3. \*

→ om je teži primjer, dijam su pravi konkretni brojevi

$R = \begin{vmatrix} \cos(30^\circ) & -\sin(30^\circ) \\ \sin(30^\circ) & \cos(30^\circ) \end{vmatrix} = \begin{vmatrix} \dots & \dots \\ \dots & \dots \end{vmatrix} \cdot \begin{vmatrix} 9 + 3t \\ -1 + 3t \end{vmatrix} = \text{rijen}$

→ skica: postavi (\*) na odn usjednost i skiciraj od usjednost i rotiranoj.

4.

$S = \begin{bmatrix} 2 & 0 \\ 0 & 1 \end{bmatrix}$

$y = x^3$

$\vec{r} = \begin{bmatrix} 2 & 0 \\ 0 & 1 \end{bmatrix} \cdot \begin{bmatrix} x \\ x^3 \end{bmatrix} = \begin{bmatrix} 2x \\ x^3 \end{bmatrix}$

skica = original nas skicirano

Kise elci i to testu da skicirajte se bude direktno skicirano nego mi moramo skicirati koliku trebamo skicirati.



5.

$$\vec{r} = \vec{r} + \vec{r} + \vec{r}$$

$$x \quad y \quad z$$

$$\vec{r} = \begin{bmatrix} x + xV + xU \\ y + yV + yU \\ z + zV + zU \end{bmatrix}$$

↓  
negled  
mesenje  
vsega.

6.

$$\begin{aligned} x - 2y - z + 3 &= 0 \\ -x + y + 2z - 1 &= 0 \end{aligned} \rightarrow \text{Gauss}$$

$$\left[ \begin{array}{ccc|c} 1 & -2 & -1 & -3 \\ -1 & 1 & 2 & 1 \end{array} \right]$$

vektorski oblik  $\vec{r} = \begin{bmatrix} 3x+1 \\ x+2 \\ x \end{bmatrix} = \begin{bmatrix} 1 \\ 2 \\ 0 \end{bmatrix} + \begin{bmatrix} 3 \\ 1 \\ 1 \end{bmatrix}$

$$\frac{x-1}{3} = \frac{y-2}{1} = \frac{z}{1}$$

kanonski oblik

7. → tu največ hude - standardno rešo pri

$$\vec{r} = \begin{pmatrix} 1-x \\ -1-x \\ 2x \end{pmatrix} \quad -x + 2y - z + 2 = 0$$

$$\begin{cases} x = 1-x \\ y = -1-x \\ z = 2x \end{cases}$$

$$\boxed{x = \frac{1}{3}}$$

na x  
delimo  
za tri  
razisa  
yena



4. 'r' obdel

1.

2.

$R=3$   $\hookrightarrow (0,0)$  goro  $\begin{bmatrix} 3 \cos t \\ 3 \sin t \end{bmatrix}$   $r' = r + t$

$\begin{bmatrix} 9 + 3 \cos t \\ -1 + 3 \sin t \end{bmatrix}$

3. \*

$\rightarrow$  ono je teže primjeniti, ali su pravi konkretni brojevi

$R = \begin{vmatrix} \cos(30^\circ) & -\sin(30^\circ) \\ \sin(30^\circ) & \cos(30^\circ) \end{vmatrix} = \begin{vmatrix} \dots & \dots \\ \dots & \dots \end{vmatrix} \cdot \begin{vmatrix} 1 + 50t \\ -1 + t \end{vmatrix} = \text{rijes}$

$\rightarrow$  skica: postavi (\*) su neki injeđnost i skiciraj od usugladi i rotiraj.

4.

$S = \begin{bmatrix} 2 & 0 \\ 0 & 1 \end{bmatrix}$

$y = x^3$

$\vec{r} = \begin{bmatrix} 2 & 0 \\ 0 & 1 \end{bmatrix} \cdot \begin{bmatrix} x \\ x^3 \end{bmatrix} = \begin{bmatrix} 2x \\ x^3 \end{bmatrix}$

skica = original no skicirano

Kada svi ti su testovi da skiciraj se bude direktno skicirano međo mi moramo skicirati koliku trebamo skicirati.



5.

$$\vec{r} = \vec{r}_x + \vec{r}_y + \vec{r}_z$$

$$\vec{r} = \begin{bmatrix} x + xV + xU \\ y + yV + yU \\ z + zV + zU \end{bmatrix}$$

↓  
nigled  
mješavina  
vješta.

6.

$$\begin{aligned} x - 2y - z + 3 &= 0 \\ -x + y + 2z - 1 &= 0 \end{aligned} \rightarrow \text{Gauss}$$

$$\left[ \begin{array}{ccc|c} 1 & -2 & -1 & -3 \\ -1 & 1 & 2 & 1 \end{array} \right]$$

vertikalni oblik  $\vec{r} = \begin{bmatrix} 3x+1 \\ x+2 \\ x \end{bmatrix} = \begin{bmatrix} 1 \\ 2 \\ 0 \end{bmatrix} + \begin{bmatrix} 3 \\ 1 \\ 1 \end{bmatrix}$

$$\frac{x-1}{3} = \frac{y-2}{1} = \frac{z}{1}$$

horizontalni oblik

7. → tu uvijek bude - standard nebo pret

$$\vec{r} = \begin{bmatrix} 1-t \\ -1-t \\ 2t \end{bmatrix} \quad -x + 2y - z + 2 = 0$$

$$\begin{cases} x = 1-t \\ y = -1-t \\ z = 2t \end{cases}$$

$$t = \frac{1}{3}$$

ako se  
odluže  
pa tri  
razisa  
yasa