

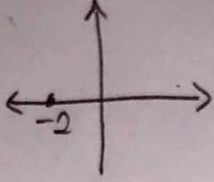
ÖDEV 2-

Canou DAL

18293039

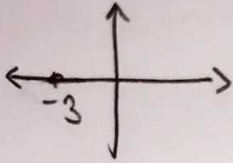
ÇBEN

a) $\lambda(\lambda+2)$ $\lambda_1=0$ ve $\lambda=-2$ 'dir



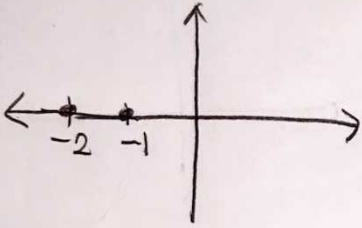
$\text{Re } \lambda_1=0$ ve $\text{Re } \lambda_2 < 0$
olduğuna göre
kararlıdır.

b) $\lambda^2(\lambda+3)$ $\lambda_1, \lambda_2=0$ $\lambda_3=-3$



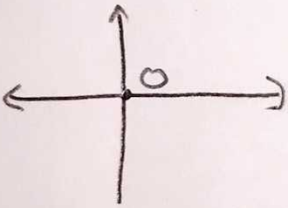
Sistem katlı kök içerdigi için kararsızdır

c) $(\lambda+1)(\lambda+2)$ $\lambda_1=-1, \lambda_2=-2$



$\text{Re } \lambda_1, \lambda_2 < 0$
olduğu için sistem kararlıdır.

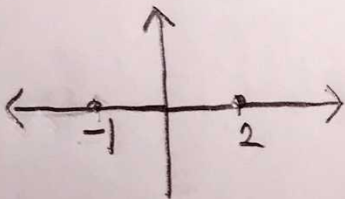
d) $(\lambda^2+1)(\lambda^2+9)$



$$\lambda_1 = \sqrt{-1} \quad \lambda_2 = -\sqrt{-1}$$
$$\lambda_3 = \sqrt{-9} \quad \lambda_4 = -\sqrt{-9}$$

$\text{Re } \lambda_1, \lambda_2, \lambda_3, \lambda_4 = 0$ olduğu için kararlıdır.

e) $(\lambda+1)(\lambda^2-4\lambda+9)$



$$\lambda_1 = -1$$
$$\lambda_2 = 2 + \sqrt{-5}$$
$$\lambda_3 = 2 - \sqrt{-5}$$

$\text{Re } \lambda_2, \lambda_3 > 0$ olduğu için kararsızdır.