Es. 716 pag. 342

$$(1+K)x^2 - 2x - K + 1 = 0 \qquad \text{con } K \neq -1$$

a) radici reciproche: $x_1 \cdot x_2 = 1$

$$x_{1,2} = \frac{-\frac{b}{2} \pm \sqrt{\frac{b^2}{4} - ac}}{ac} = \frac{1 \pm \sqrt{1 + (1+K)\cdot(K-1)}}{(1+K)(1-K)} = \frac{1 \pm \sqrt{K^2}}{1-K^2}$$

$\Delta = K^2 \geq 0 \quad K \geq 0$

$x_1 \cdot x_2 = \frac{c}{a} = 1 \quad \frac{1-K}{1+K} = 1 \quad 1-K = 1+K \quad 2K = 0 \quad K = 0$

$x_1 = x_2 = 1$

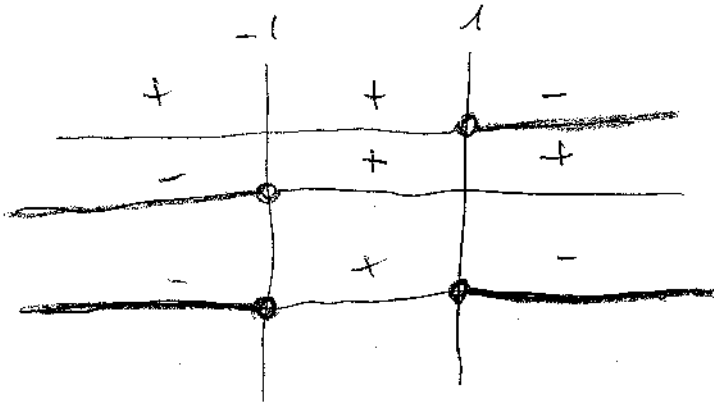
b) radici discordi $x_1 \cdot x_2 < 0$

$\frac{c}{a} = \frac{1-K}{1+K} < 0$ studio dei segni:

$1-K < 0 \quad -K < -1 \quad K > 1$

$1+K < 0 \quad K < -1$

$\frac{1-K}{1+K} < 0 \quad K < -1;\ K > 1$



c) $P = x_1 \cdot x_2 = 8 = \frac{c}{a} \quad \frac{1-K}{1+K} = 8 \quad 1-K = 8+8K \quad -9K = 7$

$K = -\frac{7}{9}$

d) $S > 0 \Rightarrow -\frac{b}{a} = \frac{2}{1+K} = x_1 + x_2 > 0$

$2 > 0$ sempre

$1+K > 0 \quad K > -1$

$\frac{2}{1+K} > 0 \quad K > -1$