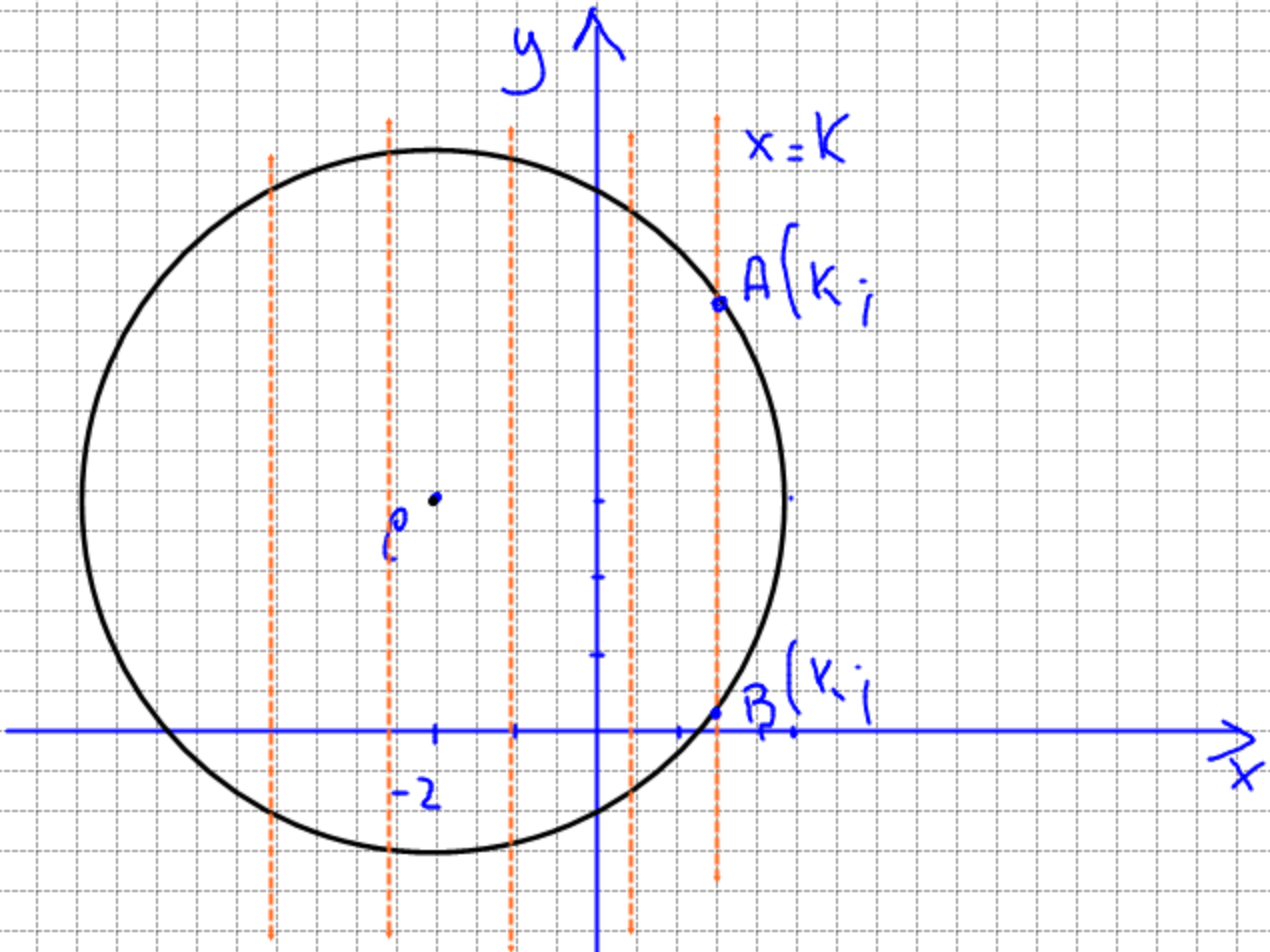


$\Delta_2: x=k \cap \rho: x^2+y^2+4x-6y-7=0 \neq \emptyset$

$A, B / \overline{AB} = 4$

$C(-2; 3) \quad r = \sqrt{4+9+7} = 2\sqrt{5}$



$$\begin{cases} x=k \\ x^2+y^2+4x-6y-7=0 \end{cases} \quad \begin{cases} x=k \\ k^2+y^2+4k-6y-7=0 \end{cases}$$

$$\begin{cases} x=k \\ y^2-6y+k^2+4k-7=0 \Rightarrow \Delta > 0 \end{cases}$$

$$\begin{cases} 9-k^2-4k+7 > 0 \rightarrow 16-k^2-4k > 0 \\ \overline{AB} = 4 \end{cases} \quad (*)$$

$x=k$

$x^2+y^2+4x-6y-7=0$

$k^2+y^2+4k-6y-7=0$

$y^2-6y+k^2+4k-7=0$

$y_{1,2} = 3 \pm \sqrt{9-k^2-4k+7} :$

$= 3 \pm \sqrt{16-k^2-4k}$

$A(k; 3+\sqrt{16-k^2-4k}) \quad B(k; 3-\sqrt{16-k^2-4k})$

$$\overline{AB} = 4 \quad \left| \beta - \sqrt{16 - k^2 - 4k} - \beta - \sqrt{16 - k^2 - 4k} \right| = 4$$

$$\overline{AB} = |y_B - y_A|$$

$$\begin{cases} \left| -2\sqrt{16 - k^2 - 4k} \right| = 4 \\ 16 - k^2 - 4k > 0 \end{cases}$$

$$|a| = \begin{cases} a & a \geq 0 \\ -a & a < 0 \end{cases}$$

$$\begin{cases} \frac{-2\sqrt{16 - k^2 - 4k}}{-2} = \frac{\pm 4}{-2} \\ 16 - k^2 - 4k > 0 \end{cases}$$

$$\begin{cases} \sqrt{16 - k^2 - 4k} = \mp 2 \\ 16 - k^2 - 4k > 0 \end{cases} \begin{cases} 16 - k^2 - 4k = 4 \\ 16 - k^2 - 4k > 0 \end{cases}$$

$$\begin{cases} -k^2 - 4k + 12 = 0 \\ 16 - k^2 - 4k > 0 \end{cases} \quad k_{1,2} = \frac{2 \pm \sqrt{4 + 12}}{-1} = \frac{2 \pm 4}{-1} = \begin{matrix} -6 \\ 2 \end{matrix}$$

$$k_{1,2} = \frac{2 \pm \sqrt{4 + 16}}{-1} = \frac{2 \pm 2\sqrt{5}}{-1} = -2 \mp 2\sqrt{5}$$

