

$$\left(x' + \frac{2}{\sqrt{5}}\right)^2 + 6\left(y' - \frac{11}{6\sqrt{5}}\right)^2 - \frac{35}{6} = 0$$

$$\begin{cases} x'' = x' + \frac{2}{\sqrt{5}} \\ y'' = y' - \frac{11}{6\sqrt{5}} \end{cases}$$

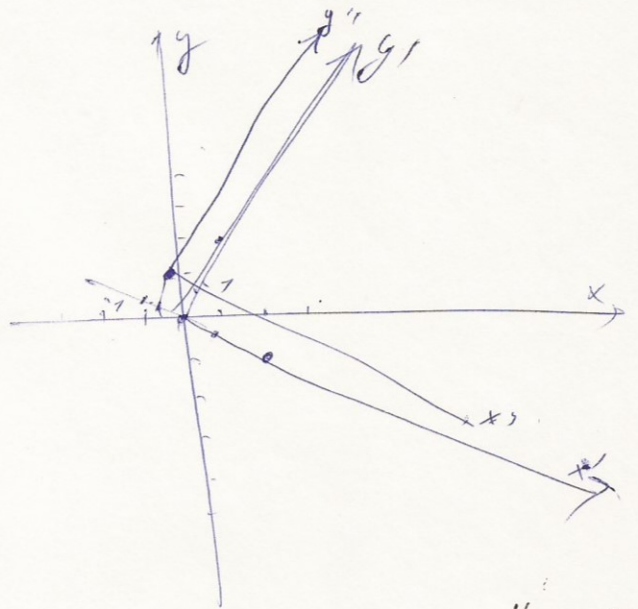
$$x''^2 + 6y''^2 = \frac{35}{6}$$

$$\frac{6x''^2}{35} + \frac{36y''^2}{35} = 1$$

знаем $\frac{x''^2}{35/6} + \frac{y''^2}{35/36} = 1$

$$\vec{e}_1 = \left(\frac{2}{\sqrt{5}} \mid -\frac{1}{\sqrt{5}}\right)$$

$$\vec{e}_2 = \left(\frac{1}{\sqrt{5}} \mid \frac{2}{\sqrt{5}}\right)$$



$\begin{cases} x = \frac{1}{\sqrt{5}}(-2x' + y') \\ y = \frac{1}{\sqrt{5}}(x' + 2y') \end{cases}$, выразим x, y через x'', y''

используя $\begin{pmatrix} -\frac{2}{\sqrt{5}} & \frac{1}{\sqrt{5}} \\ \frac{1}{\sqrt{5}} & \frac{2}{\sqrt{5}} \end{pmatrix}$
 $\approx \begin{pmatrix} -0,89 & 0,45 \\ 0,45 & 0,89 \end{pmatrix}$

$$\begin{cases} x' = x'' - \frac{2}{\sqrt{5}} \\ y' = y'' + \frac{11}{6\sqrt{5}} \end{cases}$$

$$\begin{cases} x = \frac{1}{\sqrt{5}}\left(-2x'' + \frac{4}{\sqrt{5}} + y'' + \frac{11}{6\sqrt{5}}\right) \\ y = \frac{1}{\sqrt{5}}\left(x'' - \frac{2}{\sqrt{5}} + 2y'' + \frac{22}{6\sqrt{5}}\right) \end{cases}$$