We get $\gamma = -\dfrac{b_1 + b_2 k'(x_0)}{a_1 + a_2 k'(x_0)}$

Both $a_1 + a_2 k'(x_0)$ & $b_1 + b_2 k'(x_0)$ can not be zero since A and B are linearly independent.

Here we assumed that the slope of L_0 is $k'(x_0)$.

Thus we can conclude that $\exists\ \gamma$ s.t $f(x, y) + \gamma g(x, y) = 0$ has L_0 as tangent at (x_0, y_0).

E is tangent to L_0 at some point of Γ and E passes through Γ. $\Rightarrow \#(E \cdot L_0) \geq 5$

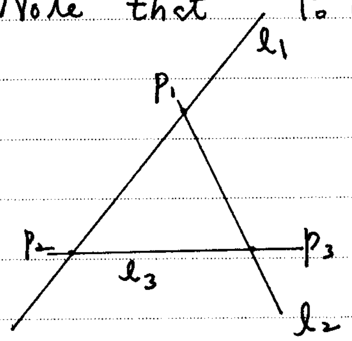
$\Rightarrow$ Since $\deg E = 4$, by P64, $E \supset L_0$.

We may assume that $L_0 = (Z_0 = 0)$.

$\Rightarrow$ If f is a homogeneous polynomial representing E, then f is divisible by Z_0.

Let $f = Z_0\, g(Z_0, Z_1, Z_2)$.

Note that $\Gamma_0 \cap \Gamma = \phi$.



Consider $l_1 \cap \{g = 0\}$.

$\Rightarrow \#(l_1 \cdot \{g = 0\}) \geq 4$.

$\Rightarrow$ Since $\deg g = 3$, $\{g = 0\} \supset l_1$.

$\Rightarrow g$ is divisible by g_1, homogeneous polynomial representing l_1 $\Rightarrow$ In the similar way, we can conclude $g = g_1 g_2 g_3$, where g_2 & g_3 are homogeneous polynomial representing l_2 and l_3 respectively.

$\Rightarrow f = Z_0\, g_1 g_2 g_3 \Rightarrow E = \Delta + L_0$.

$$\begin{array}{ccc} \mathcal{J}_{\Gamma_0}(4) = \mathcal{J}_{\Gamma_0} \otimes \mathcal{O}_{\mathbb{P}^2}(4) & \xrightarrow{\otimes [-L_0] = [-H]} & \mathcal{J}_{\Gamma_0}(3) = \mathcal{J}_{\Gamma_0} \otimes \mathcal{O}_{\mathbb{P}^2}(4-1) \\ \Psi & & \Psi \\ E & \longmapsto & E - L_0 = \Delta \end{array}$$