

(ii) Case 1. has a fixed curve of

By the formula on P 713,  $\dim |f_{\Lambda_0}(3)| = 1 + 5 \geq 3$   
 $\Rightarrow W \neq 0 \Rightarrow \Lambda_0$  does not impose independent conditions, on  $|O_{P^2}(3)|$ .

(For a moment, say it's done)

$\Rightarrow$  By the result on P 715,  $\Lambda_0$  lie on a conic or five of  $\Lambda_0$  lie on a line. For a conic, it's done.

$\Rightarrow$  Let  $l_1$  be a fixed line of  $|f_{\Lambda_0}(3)|$  which contains 5 points of  $\Lambda_0$ .

Suppose  $\#(l_1 \cap \Lambda_0) \leq 5$ , and  $\#(l_1 \cap P_0) \leq 5$ .

Let  $\Lambda'_0 = \Lambda_0 - l_1 \cap \Lambda_0 \Rightarrow \# \Lambda'_0 = 3$ .

$\Rightarrow \dim |f_{\Lambda'_0}(2)| = \dim |f_{\Lambda_0}(3)| \geq 3$ .

(i) Case 2.  $\Rightarrow \dim |f_{\Lambda'_0}(2)| = 5 - 3 + h^0(f_{\Lambda'_0}(-1)) = 2$