



$$\Rightarrow \{ \pi^* \sigma_i = 0 \} \cap \{ \pi^* \tau = 0 \} \supset E_i.$$

$$\Rightarrow f = [(\pi^* \sigma_1, \pi^* \sigma_2, \pi^* \sigma_3, \pi^* \tau)] \text{ is well-defined.}$$

① By the same argument on P687 ~ P688 note, we may choose $\tau = c + \lambda c'$ which has different slopes from those of σ_i 's at p_i .

$$\textcircled{2} \text{ By } \textcircled{1}, \underbrace{\{ \pi^* \tau = 0 \}}_{E_j} \cap \underbrace{\{ \pi^* \sigma_i = 0 \}}_{E_i} = \emptyset \text{ on } E_j \text{ for any } i.$$

$$\textcircled{3} \quad f = [(\pi^* \sigma_1, \pi^* \sigma_2, \pi^* \sigma_3, \pi^* \tau)] \\ = [(\pi^* \sigma_1 / E_i, \pi^* \sigma_2 / E_i, \pi^* \sigma_3 / E_i, \pi^* \tau / E_i)]$$

is well-defined point on \mathbb{P}^3 . near

By cancelling E_i , we have the space of sections which has no base points.

By (*) on P475,

$$\tilde{D} \sim \pi^* D - 2E_1 - 2E_2 - 2E_3.$$

By the result on P177,

$$\deg f|_{\mathbb{P}^2} = \deg \pi^* f(\tilde{\mathbb{P}}^2) = \#(\tilde{D} \cdot \tilde{D})$$

$$= D \cdot D + 4E_1 \cdot E_1 + 4E_2 \cdot E_2 + 4E_3 \cdot E_3 = 16 - 12 = 4$$

by P475 ~ P476.