

\Rightarrow Since ψ is an isomorphism of \mathbb{P}^5 , $f(\Delta)$ is the Veronese surface in \mathbb{P}^5 .

I don't quite understand why the authors mentioned $|W_1 + W_2|$ cuts out $|\mathcal{O}_{\mathbb{P}^2}(2H)|$ on Δ . I proved that W_2 is the Veronese surface as above. ??? \square

We note that W_1 is smooth away from W_2 :
if $F \in W_1$ is a conic consisting of two distinct lines, we can find another conic G meeting F transversely so that the pencil L generated by F and G will have four distinct base points.

\square Without loss of generality, since we ^{can} choose a proper coordinate, $F = X_0 X_1$ may be assumed.
Choose $G = (X_0^2 + X_1^2 + X_2^2 = 0)$

$\Rightarrow F \cap G = \{ [0, 1, i], [0, 1, -i], [1, 0, i], [1, 0, -i] \}$ and meet each other transversely.

$L = \{ F + \lambda G \}_{\lambda \in \mathbb{P}^1}$ has four distinct base points. \square

By argument 3, L will meet W_1 in three distinct points, so that $m_F(L, W_1) = 1$ and F is a smooth point of W_1 .

\square By argument 3 on p742, $\#(L \cap W_1) = 3$ and $L \cap W_1$ is a set of three distinct points.