

aining a line passing through  $p$ .  $\Rightarrow$  The pencil  $\{aF + bF'\}$  contains the line.

③ Suppose  $l$  lies on a pencil and lies on a quadric which is not contained in the pencil.  
 $\Rightarrow l$  lies on all quadrics of  $N_p \Rightarrow$  Contradiction.

$\Rightarrow$  By the notes ①, ② & ③,

$\pi: I \rightarrow \mathbb{P}^2$ ,  $\pi^{-1}(q)$  is a one-point set or a line  $\mathbb{P}^1$ . If we consider  $[F_1(q), F_2(q), F_3(q)]$ , then we can see that  $\{q \mid \#\pi^{-1}(q) = 1\}$  is a generic set. Thus  $\pi: I \rightarrow \mathbb{P}^2$  expresses  $I$  as the blow-up of  $\mathbb{P}^2$  at the points of intersection of  $\mathbb{P}^2$  with the lines  $l \in V_1(W)$  through  $p$ .

$\Rightarrow$  By the result on P474,

$$H_i(I) = H_i(\mathbb{P}^2) \oplus H_i(nE) \quad i > 0$$

where  $n$  is the number of the blow-ups.

$$\Rightarrow \chi(I) = \chi(\mathbb{P}^2) + n, \quad (n \text{ is the number of lines in } V_1(W) \text{ through } p)$$

$$\Rightarrow 10 - 3 = n = 7$$

$$\Rightarrow \#(V_1(W) \cdot \sigma_p) = 7$$

$\square$

The calculation for  $\#(V_1(W) \cdot \sigma_p)$  is somewhat more difficult. Let  $H$  be a generic plane in  $\mathbb{P}^3$ , and let  $X$  be the restriction to  $H$  of the web  $W$ . If  $l \subset H \subset \mathbb{P}^3$  lies on a pencil  $\{F_\lambda\}$  of quadrics in  $W$ , then the conics  $\{C_\lambda = F_\lambda \cap H\}$  in  $X$  are all singular; thus we may ask for the number of pencils