

$$\Rightarrow \#(S^* \cap \ell_x^*) = \# \text{ of lines in } X \text{ passing through } x \\ = 4$$

Note: Let K be a pencil in \mathbb{P}^{3*} .

$\Rightarrow \exists$ two linearly independent hyperplanes $p \cdot X = 0$, & $p' \cdot X = 0$, where $X = [X_0, X_1, X_2, X_3]$
 $p = [p_0, p_1, p_2, p_3]$ & $p' = [p'_0, p'_1, p'_2, p'_3]$.

$\Rightarrow (\lambda p + \lambda' p') \cdot X = 0$ contains a line, for all $\lambda, \lambda' \in \mathbb{C}$. The line is expressed as $\ell_x, x \in G$.
 $\Rightarrow K = \ell_x^*$ as above.

Likewise, the second argument goes over, and indeed establishes an important point: given any line $\ell_x \subset \mathbb{P}^3$ not passing through any points of R or lying in any hyperplanes of R^* , we have two pencils on the surface $U = T_x(G) \cap X$:

$$\{X_p = \sigma(p) \cap U\}_{p \in \ell_x} \text{ and } \{X_h = \sigma(h) \cap U\}_{h \supset \ell_x}.$$

\square $h \longmapsto X_h$ is 'some sort of' linear.

Both are Lefschetz, and so the number of singular fibers in each is $\chi(U) - 4$.

\square $\{X_p\}$ is Lefschetz by p765. Since $\ell_x^* \cap R^* = \emptyset$,