Using the discussion of Section 4 of Chapter 4, I has Euler characteristic 10.

See p548.

On the other hand, the map $I \longrightarrow \mathbb{P}^2$ 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; there are thus $\chi(I) - \chi(\mathbb{P}^2) = 10 - 3 = 7$ such lines.

Note: ① Given any point $q \in \mathbb{P}^2$, then there exists a quadric containing $\overline{pq}$.
Let $N_p = \langle F_1, F_2, F_3 \rangle$ as above. Choose points $q_1 \neq q_2 \in \overline{pq}$ s.t. $q_1, q_2 \neq p$.
Consider the following equations:

$$x_1 F_1(q_1) + x_2 F_2(q_1) + x_3 F_3(q_1) = 0$$
$$x_1 F_1(q_2) + x_2 F_2(q_2) + x_3 F_3(q_2) = 0.$$

$\Rightarrow \exists$ a nontrivial solution i.e. not all x_1, x_2, x_3 zero solution.
$\Rightarrow$ For some nontrivial solution x_1, x_2, x_3,
$\#(x_1 F_1 + x_2 F_2 + x_3 F_3 \cap \overline{pq}) \geq 3$, since $\sum x_i F_i \cap \overline{pq} \supset \{p, q_1, q_2\}$.
$\Rightarrow x_1 F_1 + x_2 F_2 + x_3 F_3 \supset \overline{pq}$.
Thus $I \longrightarrow \mathbb{P}^2$ is onto.
② Suppose $\exists$ distinct two quadrics F, F' cont-