Thus $\tau(W)$ meets $\sigma_{n-2,n-3}$ in four points generically, and so

$$\tau(W) \sim 4 \cdot \sigma_{2,1} \quad .$$

$\ulcorner$ We know that $\tau(W) \cap \sigma_{n-1,n-4} = \phi$. and $\tau(W) \cap \sigma_{n-2,n-3} = \{4 \text{ lines}\}$, two lines pass through p_1
" p_2.

If $l \in T_{p_i}W' \cap W$, then $l \subset S \cap W = W'$. $l \in \tau(W)$
$l \cap l_0 \ni p_i$ and $l \subset S$ $\Rightarrow$ $l \in \sigma_{n-2,n-3}$. $\Rightarrow l \in \tau(W) \cap \sigma_{n-2,n-3}$. $\Rightarrow$ $\tau(W) = 4 \cdot \sigma_{2,1}$ $\lrcorner$

In particular, if W and W' are two generic quadric hypersurfaces in $\mathbb{P}^4$, meeting transversally in a smooth surface S, then by the above S will have

$$\#(\tau(W) \cdot \tau(W'))_{G(2,5)} = \#(4\sigma_{2,1} \cdot 4\sigma_{2,1})_{G(2,5)} = 16$$

lines in $\mathbb{P}^4$ lying on it. We will verify this in Section 4 of Chapter 4.

$\ulcorner$ $n = 5$, $k = 2$ $\quad 3 - 1 = 3 - 1 = 2 = n - k - a_2$
$n - k - a_1 = 3 - 2 = 1$
$\#(\tau(W) \cdot \tau(W'))$ = topological cardinality of $\tau(W) \cap \tau(W')$
$\#\{$lines contained in W and $W'\}$ = $\#\{$lines contained in $W \cap W' = S\}$. For any smooth intersection of two quadric hypersurfaces, the intersection surface will have 16 lines. $\lrcorner$

Similarly, we will be able to compute the homology class of $\tau(W) \subset G(2, n+1)$ for other hypersurfaces of low degree, once we know a few more things about