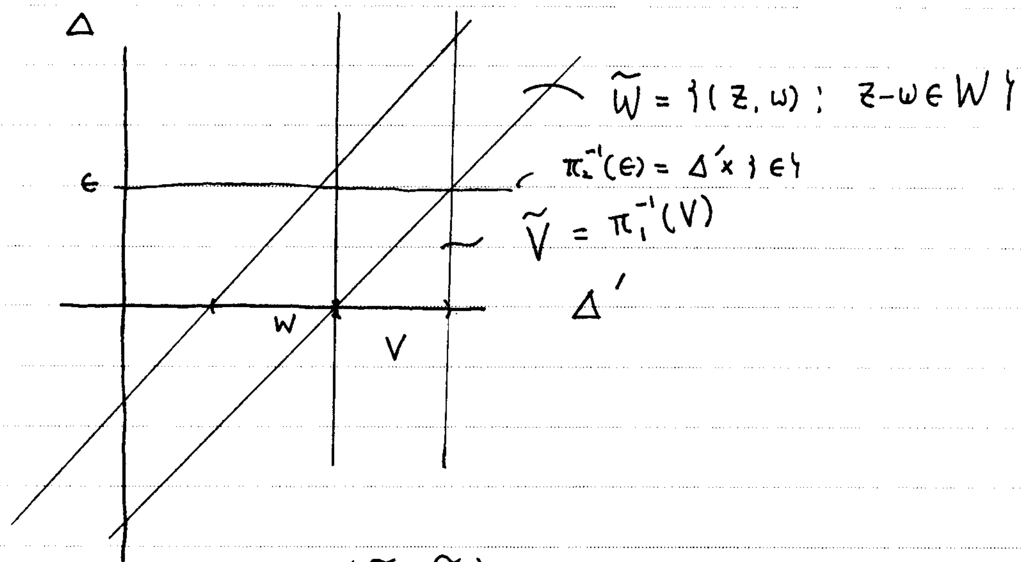
$\Rightarrow \quad T_{(p,\epsilon)}(\pi_2^{-1}(\epsilon)) = (T\Delta', 0)$. $\quad \tilde{V} \cap \tilde{W} \ni (p, \epsilon)$

For no confusion, $\epsilon = x$ $\quad$ See P198 note. for the rest of the proof.



$$\pi_2^{-1}(\epsilon) \cap (\tilde{V} \cap \tilde{W})$$
$$= (\pi_2^{-1}(\epsilon) \cap \tilde{V}) \cap (\pi_2^{-1}(\epsilon) \cap \tilde{W})$$
$$= (V \times \{\epsilon\}) \cap (W + \epsilon \times \{\epsilon\}) = \{V \cap (W+\epsilon)\} \times \{\epsilon\}$$
$$\Big\downarrow \ \pi_1 \ (\text{isometry})$$
$$V \cap (W+\epsilon).$$

$\Rightarrow$ $\pi_2^{-1}(\epsilon)$ will meet the intersection $\tilde{V} \cap \tilde{W}$ transversely at (p, ϵ) $\Leftrightarrow$ V and $W+\epsilon$ meet transversely at p. See note P198. $\lrcorner$

The intersection $\tilde{V} \cap \tilde{W} \subset \Delta' \times \Delta'$ is an analytic variety of dimension n, and so the projection $\pi_2 : \tilde{V} \cap \tilde{W} \longrightarrow \Delta'$ expresses $\tilde{V} \cap \tilde{W}$ as a branched μ-sheeted cover of Δ'; accordingly, we see that for $\epsilon \in \Delta'$ lying outside an analytic subvar