② Let $\dim M = 1$. $\Rightarrow$ M is a curve.

$\Rightarrow$ (i) $\dim(M \cap H)_s = 0$.

$\Rightarrow$ $(M \cap H)_s = \{a_1, a_2 \cdots a_\ell\}$.

$\Rightarrow$ $T_{a_i}M \subset T_{a_i}H$

Suppose all $T_{a_i}M$'s are distinct each other.

$\Rightarrow$ We can get the generic hyperplanes $\{H_i\}$ for each $T_{a_i}M$ s.t $T_{a_i}M + T_{a_i}H_i = T_{a_i}\mathbb{P}^N$.

$\Rightarrow$ Consider $\{H\} \cap \{H_1\} \cap \cdots \cap \{H_\ell\} = \{H'\}$

$\Rightarrow$ $\{H'\}$ is the set of generic hyperplanes s.t $M \cap H'$ is smooth.

Suppose $T_{a_1}M = T_{a_2}M$ without loss of generality.

$\langle a_1, a_2 \rangle \subset H$ $\Rightarrow$ $\langle a_1, a_2 \rangle = T_{a_1}M = T_{a_2}M = \mathbb{P}^1 \subset H$

$\Rightarrow$ We have to embed M differently so that M has no bitangent point.

Let's accept the statement (which circumstance we can always avoid by embedding M differently.)

(ii) $\dim(M \cap H)_s = 1$. $\Rightarrow$ $(M \cap H)_s = \mathbb{P}^1$

$\Rightarrow$ $\mathbb{P}^1 \subset M$ $\Rightarrow$ $M = \mathbb{P}^1$

$$\mathbb{P}^1 \xrightarrow{f} \mathbb{P}^2$$

$$[z_0, z_1] \longmapsto [z_0^2, z_0 z_1, z_1^2]$$

$\Rightarrow$

$f(t) = (1, t, t^2)$

$f'(t) = (0, 1, 2t)$ $\Rightarrow$ $f'(t) \neq f'(t')$ if $t \neq t'$.

$\Rightarrow$ $\nexists$ no bitangent point on $f(\mathbb{P}^1)$. ⌟