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$L|_D$, $\sigma(p_1) \neq \sigma(p_2)$. here we used $L|_D = H_{\mathbb{P}^1}$.
$\Rightarrow$ By p177, $\exists$ a section τ of L s.t $i^*\tau = \sigma$. $\Rightarrow$
$\tau(p_1) \neq \tau(p_2)$. This implies that the linear system $|L|$ seperates points on D. ⌟

But since $\dim |L| = 2$, we see that for every two points $p, q \in M$ we can find a curve $D \in |L|$ passing through p and q.

⌜ $H^0(M, \mathcal{O}(L)) = \langle \sigma_1, \sigma_2, \sigma_3 \rangle$.

$a_1 \sigma_1(p) + a_2 \sigma_2(p) + a_3 \sigma_3(p) = 0$

$a_1 \sigma_1(q) + a_2 \sigma_2(q) + a_3 \sigma_3(q) = 0$.

$\Rightarrow \exists$ nontrivial solutions, i.e, not all zero a_i's.
Let $(\sigma = a_1\sigma_1 + a_2\sigma_2 + a_3\sigma_3 = 0) = D$. ⌟

Thus the linear system $|L|$ has no base points, and the map

$$\iota_L : M \longrightarrow \mathbb{P}^2$$

seperates points; it follows that ι_L is surjective, and hence is an isomorphism. Q.E.D.

⌜ Suppose p is a base point. Consider a curve $D \ni p$.
$\Rightarrow$ Any section of $L|_D$ is zero at p, which is absurd.
For, $L|_D$ is very ample. $\exists$ a section τ not vanishing at p. $\Rightarrow$ $\tau = i^*\sigma$, σ a section of L. $\Rightarrow$ $\sigma(p) \neq 0$.
Since $\exists$ σ a section of L s.t, for $p \neq q \in M$, $\sigma(p) = 0$,

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