⌈ C, D, E cubics $\Rightarrow$ They are represented by homogeneous polynomials of degree 3, in $\mathbb{P}^2$. $\Rightarrow$ $\#(C\cdot D)=9$.

$\overset{''3}{m}+\overset{''3}{n}-3=3$. see P672

Proof. Let F, G, H be homogeneous cubic polynomials defining C, D, E, respectively. Suppose L is a linear form vanishing at q and at two points R_1, R_2 on C but not on D.

⌈ We can find a hyperplane $\overset{H}{\vee}$ passing through q.
$\Rightarrow \#(H\cap C)=\{q, R_1, R_2\}$, $R_1, R_2 \notin D$. $\Rightarrow$ H represents a linear form L.
Applying the lemma and Max Noether theorem to HL, we have

$$HL = AF + BG.$$

⌈ Note here that $r \notin C\cap D$. $\Rightarrow$ $F(r)\neq 0$ or $G(r)\neq 0$
$\Rightarrow$ $I_r = \mathcal{O}_r$ $\Rightarrow$ $\underset{\uparrow r}{(HL)} \in \mathcal{O}_r$ obviously.

So we have only to worry about points in $C\cap D$.
$\forall p\in C\cap D$. $C=(F=0)$.
$\mathrm{Ord}_{C,p} HL \geq \mathrm{Ord}_{C,p} G$ by the assumption $\mathrm{Ord}_{C,p}(H)\geq \mathrm{Ord}_{C,p}(G)$ for all $p\in C\cap D-\{q\}$ and $\mathrm{Ord}_{C,q}(H)\geq \mathrm{Ord}_{C,q}(G)$,

since L passes q. $\Rightarrow$ By the lemma above,