

Combined with the fact that $S^* \subset \mathbb{P}^{3*}$ is the dual variety of $S \subset \mathbb{P}^3$, this proves that

The Kummer surface S is self-dual.

□ This means that $S = S^*$, I think.

□

Two Configurations Revisited

We may, by considering the Kummer surface $S \subset \mathbb{P}^3$ and its desingularization $\Sigma \subset \mathbb{P}^5$ as the images of the Abelian variety A , get a new slant on the configurations associated to these varieties. To see this, think of A as the Jacobian of the curve $B = B_L$, and realize B as the locus of

$$y^2 = \prod_{i=0}^5 (x - \lambda_i),$$

with $p_i = (\lambda_i, 0)$ the Weierstrass points of B .

□ genus of $B = 2$ by P 1782. \Rightarrow $\iota_K: B_L \rightarrow \mathbb{P}^1$ is not embedding $\Rightarrow B_L$ is called hyperelliptic by P 247. \Rightarrow By P 254, B_L can be realized as the smooth completion of the locus $y^2 = g(x)$