

Title

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Question: how do we define $h_{V,D}$?

Answer: write $D = D_1 - D_2$ which are (very) ample divisors and basepoint free. We then obtain embeddings

$$\begin{aligned}\varphi_1 : V &\hookrightarrow \mathbb{P}_K^{n_1} \\ \varphi_2 : V &\hookrightarrow \mathbb{P}_K^{n_2}.\end{aligned}$$

So write

$$h_{V,D}(p) = h(\varphi_1(p)) - h(\varphi_2(p)) + O(1)$$

Example : For E/K an elliptic curve,

- $2[0]$ is an ample divisor
- $3[0]$ is a very ample divisor.