

# NUMBER FIELDS

$K = \mathbb{Q}(\alpha)$  where  $f(\alpha) = 0$ ,  $f(x) \in \mathbb{Z}[x]$ .

$\mathcal{O}_K$  ring of integers of  $K$   
(those  $\beta \in K$  roots of monic  $g(x) \in \mathbb{Z}[x]$ )

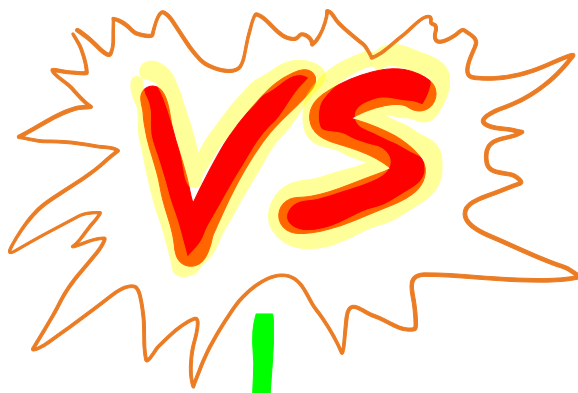
# V/S

# ELLIPTIC CURVES

$E: y^2 = x^3 + Ax + B$ ,  $A, B \in \mathbb{Q}$ , smooth (projective)

$E(\mathbb{Q}) = \{ (x, y) \in E : x, y \in \mathbb{Q} \}$

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ELLIPTIC CURVES







