

QUIZ 5

November 18, 2015

Each question carries 5 points.

Problem 1. Is the extension $\mathbb{Q}(X, Y) \supset \mathbb{Q}(X^p, Y^p)$ simple?

Problem 2. Let p be a prime. Prove that the extension $\mathbb{F}_p(X, Y) \supset \mathbb{F}_p(X^p, Y^p)$ is not a simple extension.