

## Introduction to Commutative Algebra and algebraic Geometry Presence Exercise to Sheet 8

---

**Exercise 1.**

Compute  $I \cap K[y, z]$  for  $I = \langle x^2 + y^2 + 1, z - x - 1 \rangle$ .

Can you generalise the result for  $J = \langle f(x, y), z - x - 1 \rangle$  with  $f \in K[x, y]$ ?

---