

## Week 8 Friday

Make sure you know your neighbors' names, and then:

Remind yourself and your neighbors what  $\mathbb{P}^n(k)$  is. What are its elements? Do you remember what it means to say that a point of  $\mathbb{P}^n(k)$  has many coordinate representations?

## Projective Varieties

1. Show that  $\phi(a : b) = (a^2 : ab : b^2)$  is a well-defined injective function whose image is equal to  $V(xz - y^2) \subseteq \mathbb{P}^2$ .