Dictionary

Geometry

- $X$ q-a. variety
- Closed subsets in $X$
- $D(f), f \in k[X]$
- $X \times Y$
- Irreducible $X$
  - Points in $X$
  - Irred closed subsets in $X$
- Irreducible components of $X$
- Regular maps
- Birational equiv. class of $X$
- Dominant ret. map $X \to Y$
- Closed irreducibles containing $Z \subseteq X$
- Components of $X$ containing $Z$

Algebra

- $k[X]$
- Ideals in $k[X]$
- $k[X]_+$
- $k[X] \otimes k[Y]$
- $k$
- $k[X]$ domain
- Maximal ideals in $k[X]$
- Prime ideals in $k[X]$
- Minimal prime ideals in $k$
- $k$-algebra homs
- $k(X)$
- Field homs $k(Y) \to k(X)$
- Prime ideals in $\mathcal{O}_{X,Z}$
- Minimal prime ideals in $\mathcal{O}_X$