

HW 1
Math 672

Due Friday Jan 27, in class.

1. Read Chapter 1 of *The Rising Sea: Foundations of Algebraic Geometry* (Ravi Vakil).
2. 1.3.C
3. 1.3.Q
4. 1.3.T
5. 1.3.U
6. Consider the category J associated to the picture $* \leftarrow * \rightarrow *$. For $F : J \rightarrow \mathbf{Set}$ a functor to the category of sets (i.e. a diagram of Sets indexed by J), describe the colimit of this diagram.
7. 1.4.F (not graded)