AAG, WEEK 6: EXERCISES

(1) Let X be the ringed space $(S^1, \mathbf{Z}_{S^1})$ with S^1 the topological circle, and $\mathbf{Z}_{S^1}$ the constant sheaf of rings. Compute $\operatorname{Pic} X$.

(2) Show that every finite subset of $\mathbf{P}^d_{\mathbf{Z}}$ is contained in an affine open subset.