In this thesis, we will formally define objects in Euclidean geometry, lattices and affine lattices and use them to describe objects in integer trigonometry. We will prove that the described objects in integer trigonometry are invariant under the action of the group of integer affine transformations and pose some similarities with Euclidean geometry in $\mathbb{R}^2$. We will prove geometric interpretations of definitions of said objects, their other properties and visualize them using concrete examples.