

Abstract:

Given a geometric object X , one might ask what it looks like from infinitely far away. If X has finite diameter, this is easy to figure out - as the viewer moves farther and farther away, X should shrink away to a single point. But what if X is infinite? In the process of answering this question, we will discuss various ways of taking limits of metric spaces, define one possible answer to the question (the asymptotic cone), give a bizarre example or two, and try to justify why getting mixed up in this sordid business is actually useful sometimes.

Prerequisites: belief in the Axiom of Choice and a willingness to squint really hard.