Penrose: turning mathematical notation into beautiful diagrams
Katherine Ye, Carnegie Mellon University

Penrose is a platform that enables people to create beautiful diagrams just by typing mathematical notation in plain text. The goal is to make it easy for non-experts to create and explore high-quality diagrams, providing deeper insight into challenging technical concepts. We aim to democratize the process of creating visual intuition. We’re also interested in diagramming mathematical objects that do not have a natural geometric representation (e.g., objects from abstract algebra, rather than geometry or topology).

We are looking to collaborate with mathematical illustrators on designing and building the Penrose Standard Library. We are also interested in hearing people’s feedback on the experience of using Penrose. Currently we support, at an introductory level, making diagrams about sets, functions, vectors, geometric constructions, meshes, and light paths. Try it out here: http://use.penrose.ink