Texture Mapping Practice

Texture Mapping a Cone

When texture mapping a cone, there are several ways one could “unwrap” the cone onto the texture. Here, we’ll imagine that the entire top line of the texture ($v = 1$) is mapped to the tip of the cone, and the bottom line of the texture ($v = 0$) is mapped to the bottom rim of the cone. For a cone with height $h$ and radius $r$, create a texture mapping method that will map each point $(x, y, z)$ on the surface (not the base) of the cone to a point $(u, v)$ on a rectangular texture.