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Assignment 7

1. Define and describe, in detail, the difference between minification and magnification in texture mapping.

Minification is when a small portion of the texture is mapped to a large part of the screen.

Magnification is when a large portion of the texture is mapped a small part of the screen.

They are both a way to map texels to pixels

2. What is mip mapping? Why would it be used?

It is an efficient way to store pre-filtered versions of a texture map. It is used when object that project to an area of screen space that is small compared with the size of the texel array and therefore we do not need the resolution of the original texel array.

3. What is an environment map? Why would it be used?

It is when a texture is transferred in the direction of the reflected ray from the environment map onto the object. It is an approximation based on the assumption that items in the environment are far away from the surface of the shiny object. It is used when there is a small object in a large room.