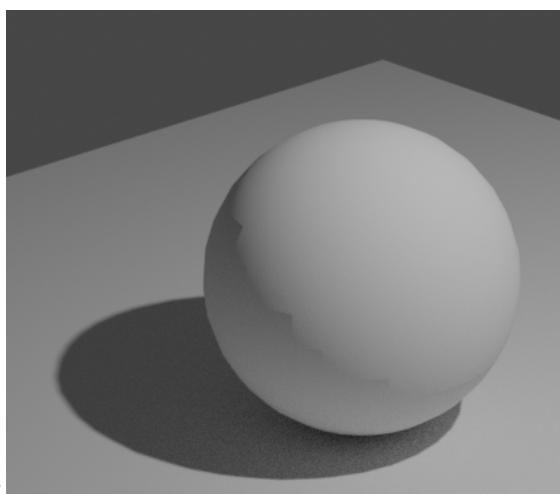


Checkpoint 1.1:



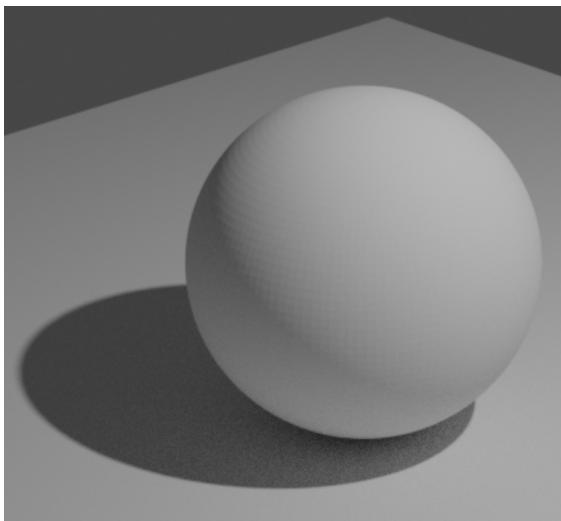
Checkpoint 1.2:

Checkpoint 1.3:

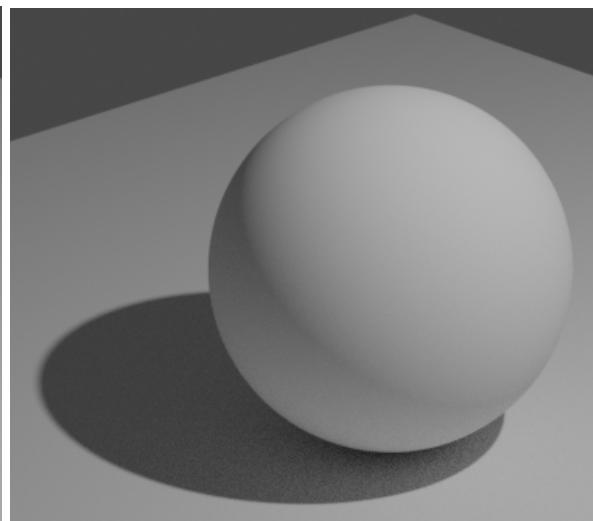
Smooth shading makes the sphere appear pretty smooth. There are still some artifacts along the curved shadow line, but it's pretty good. "The mesh faces will blur at the edges" -

<https://docs.blender.org/manual/en/latest/modeling/meshes/editing/face/shading.html>

Checkpoint 1.4:



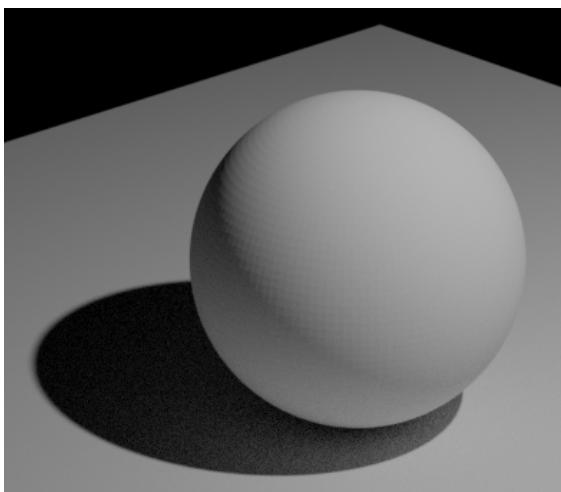
Checkpoint 1.5:



Checkpoint 1.6:

Using subdivision with the shading (smooth or flat) leads to less artifacts and a smoother transition from lighter shades to darker. Using both of these will increase the complexity of the scene, making it a higher quality image that will cost more to render.

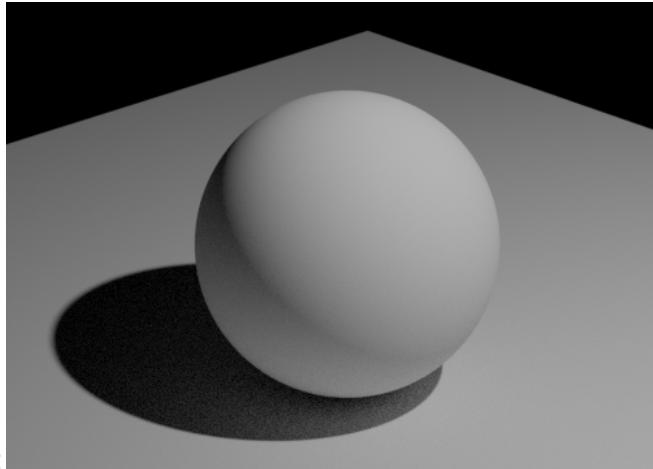
Checkpoint 2.1:



The RGB of the lower power image is .0108. The RGB of the higher power image is .0353. The color values become higher as more light is on the pixel.

Checkpoint 2.2:

The higher your light power is, the stronger irradiance you will have.

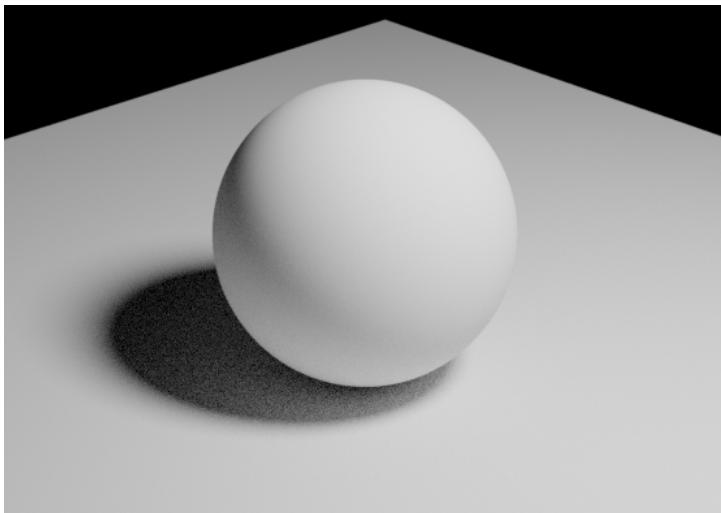


Checkpoint 2.3:

Checkpoint 2.4:

By moving the light closer you can see more light reaching the plane. The transition from lighter colors to darker on the sphere is also faster.

Checkpoint 2.5:



Checkpoint 2.6:

The area light places much more light onto the plane as well as the ball. The area distribution of the light makes more of the sphere brighter white/grey all around.

Checkpoint 3:



Checkpoint 4:



For the sphere I pushed the metallic setting to max. This gave the sphere a very metallic look in that the different pixels took on grey shine. For the plane I changed the plane color and also turned the sheen all the way up. I don't think the sheen had much effect.



For the sphere I changed the emission setting to red. This made the sphere emit a red light which reflected off of the plane. For the plane I turned the transmission to max. This made the surface of the plane greyish brown and somewhat speckled like TV static.



For the sphere I changed the anisotropic setting to max. This created 2 light bands along the top of the sphere which make it look like there are 2 light rings illuminating the area. For the plane I turned the specular setting to max. I don't think this had much effect at all.