Ambient:

Ambient is a background light. We can see from the pictures how the ambient light lights up the entire torus. We can add a color to this light, and it will affect the entire torus just like the white light did.

- No normal input
- No light positions or surface directions
- A general level of brightness for a model that is independent of the light positions or surface directions.

Specular/Phong:

The phong reflection depends on where you are. These are the bright spots on objects (such as polished metal, apple, etc). Light is reflected from the surface unequally to all direction. There is near total reflection of the incident light in a concentrated region around the specular reflection angle.
Phong has a surface normal, light, and viewpoint. We can see the phong reflection added to our images. The phong light has been changed in one picture to a different color.

Lambert / Diffuse:

The illumination that a surface receives from a light source. The brightness of the surface is independent of the observer position. Light is reflected in all directions equally. Lambert's law tells us how much light the surface receives from a light source. It depends on the angle between its angle and the vector from the surface point to the light. Lambert has an angle between surface normal and light. We can see the lambert light in our images. We even changed the light to a different color.

Fresnel:

The fresnel effect changes the fraction of light incident on a facet that is actually reflected rather than absorbed. We can see how much more light is reflected on the facet when looking at our pictures.

Color effect:

Color effects change the color of the light in this case. We can see this applied in a variety of the photos.

Code analysis:

Some code has been commented as well. This analysis is done in midterm.cgfx.