1. Use the program Lecture 12 Demo 2.cpp. Rotate the scene left and right. Judging by the reflections off the surfaces, where does the light source appear to be, relative to the viewpoint?

2. Use the program Lecture 12 Demo 3.cpp. Rotate the scene left and right. Judging by the reflections off the surfaces, where does the light source appear to be, relative to the viewpoint?

3. In the display() function in Lecture 12 Demo 13.cpp, reverse the order of the function calls setView() and setLight(). Rotate the scene left and right. Judging by the reflections off the surfaces, where does the light source appear to be, relative to the viewpoint?

4. In the previous exercise, which arrangement is more realistic?

5. Use the program Lecture 12 Demo 4.cpp. In the function setLights(), change the value of light_ambient from (0.3, 0.3, 0.3, 1.0) to (1.0, 1.0, 1.0, 1.0). What is the effect?

6. In the function setLights(), change the value of light_ambient from (0.3, 0.3, 0.3, 1.0) to (0.0, 0.0, 0.0, 1.0). What is the effect? Now change it back to (0.3, 0.3, 0.3, 1.0).

7. In the previous exercise, the objects were not entirely black. Why is that?

8. Ambient light levels are usually set relatively low, e.g., (0.3, 0.3, 0.3). Why?

9. Use the program Lecture 12 Demo 5.cpp. In the function setLights(), set the value of light_diffuse to (1.0, 1.0, 1.0, 1.0). What is the effect? Is the effect desirable?

10. Set the value of light_diffuse to (1.0, 0.0, 0.0, 1.0) (red light). What is the effect? Specifically, what is the effect on the green cone and the blue torus? Why is the dark side of the dodecahedron greenish?