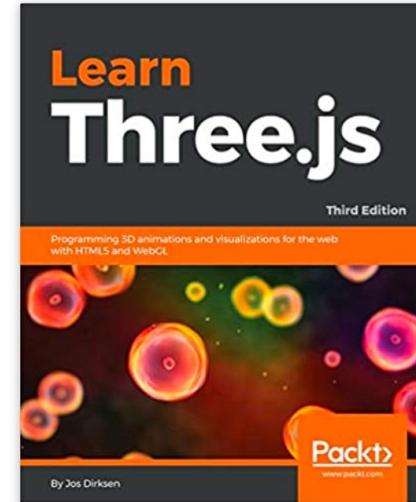


COMPUTER GRAPHICS



* Adapted from CISC 3326 lecture by Michael Mandel

EXERCISES

Exercise 1: Pink ball

- Consider these photos of a pink plastic ball:



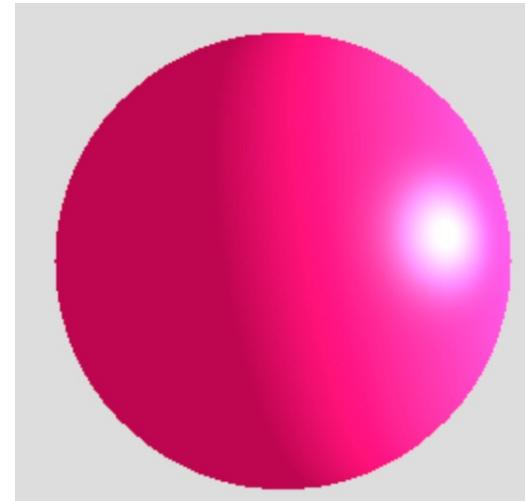
Exercise 1: Pink ball

- Do you see the effects of specularity?
 - If so, where?
- Do you see the effects of diffuse reflection?
 - If so, where?
- Do you see the effects of ambient light?
 - If so, where?



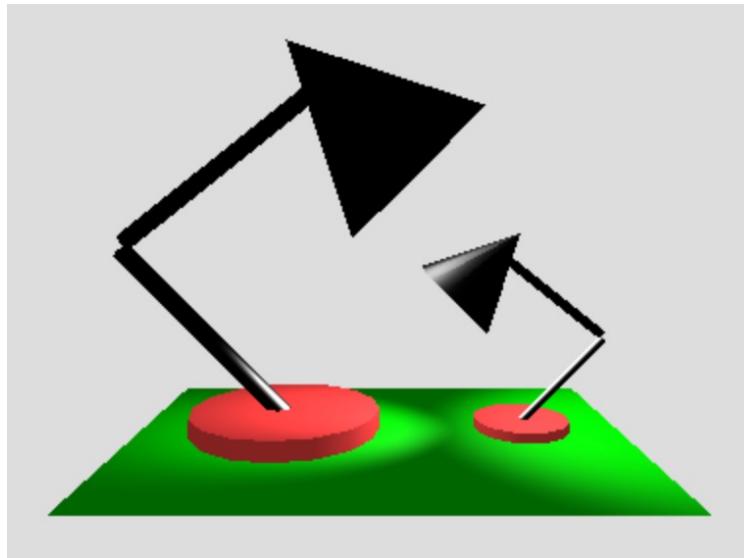
Exercise 1: Imitate the pink ball

- Using this [starter pen](#), try to imitate the pink plastic ball.
- Here's a GUI to help: [pink ball GUI](#)
- Your final code might look something like this
 - Your solution does not need to be perfect



Exercise 2: Add a light source to the Luxo lamp

- Real Luxo lamps have bulbs that emit light, as in this scene with Luxo Mom and Junior:



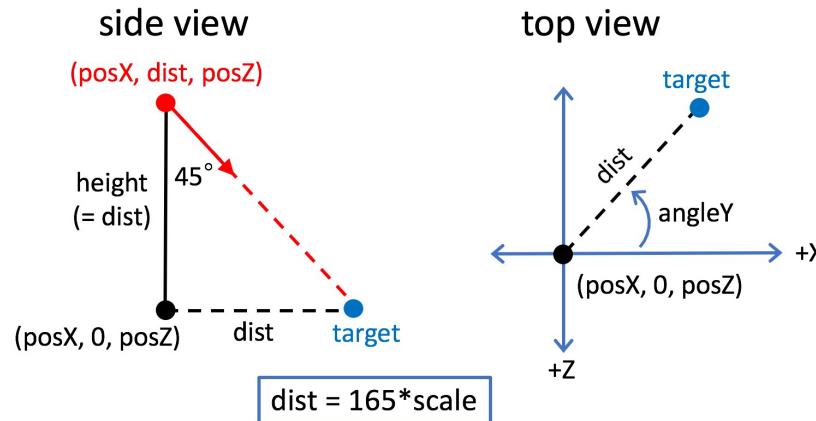
- Illuminated Luxo family

Exercise 2: Add a light source to the Luxo lamp

- Starting with starter pen, complete these steps to add a spotlight for each Luxo lamp in the scene:
 - Modify the materials stored in the colorMaterials array to be Phong materials instead of basic materials
 - Fill in the inputs to the THREE.SpotLight() constructor in the function addLuxoBulb()
 - that adds a spotlight to the scene for a Luxo lamp
 - you can mostly use default values here
 - think about what angle to use in this case
 - experiment with the penumbra value

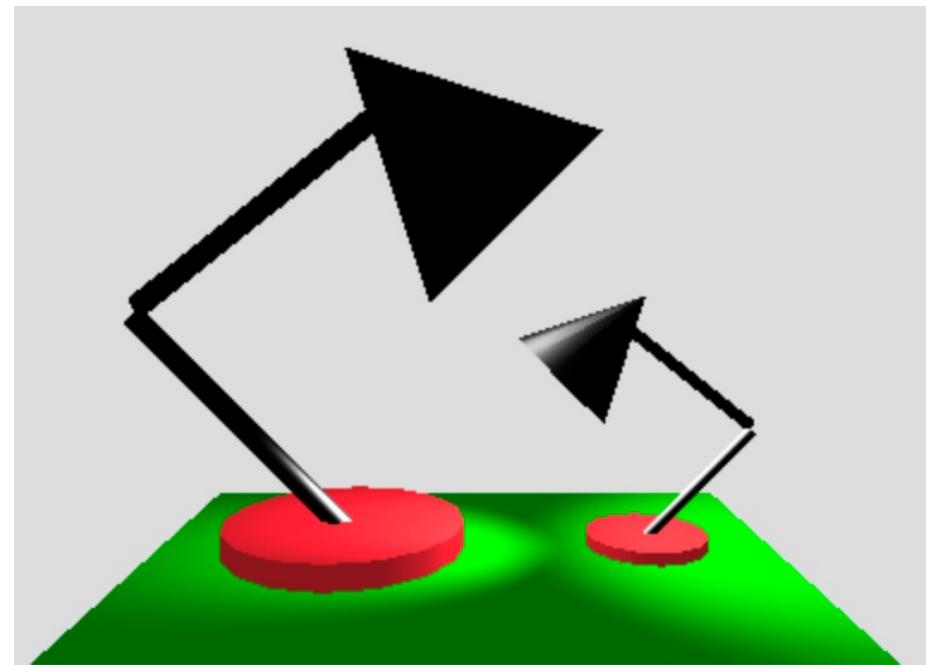
Exercise 2: Add a light source to the Luxo lamp

- Modify the position of bulbTarget in the addLuxoBulb() function:
 - the target should be on the ground
 - at a distance dist from the origin of the lamp ($posX, 0, posZ$)
 - and at an angle $angleY$
- (these variables are all defined in the code):



Exercise 2: Add a light source to the Luxo lamp

- Add two calls to the addLuxoBulb() function, to add bulbs for Mom and Junior
- Your final code might look something like this:



Questions?

