

3080/GV10 Exercises

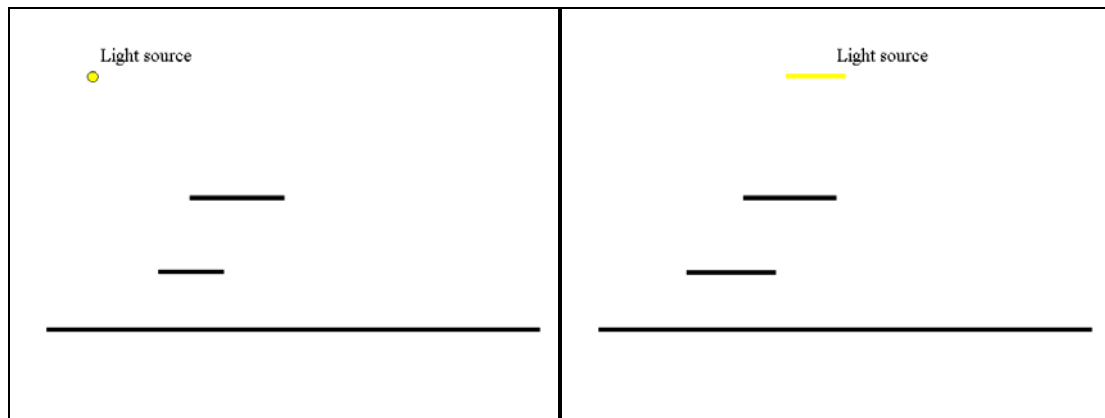
Exercise 1

- Explain the difference between shadow umbra and penumbra.
- Explain the advantages and the disadvantages of computing visibility with rays. What can be done to accelerate the computation?
- Describe the algorithm used for the shadow map (or shadow Z-buffer) method. Explain the advantages and disadvantages of this method.
- Describe the discontinuity meshing method. Explain the advantages and disadvantages of this method.

For each of the methods mentioned in (b), (c), and (d), give an example of application for which the method would be more appropriate to be used.

Exercise 2

Draw the discontinuity lines that will describe the shadow boundaries, given the following scene configuration, with a point light source. Indicate the type of shadows under each region.



Exercise 3

A very used method for calculating shadows is called shadow map. Could you combine it with a radiosity method or a ray tracing method?