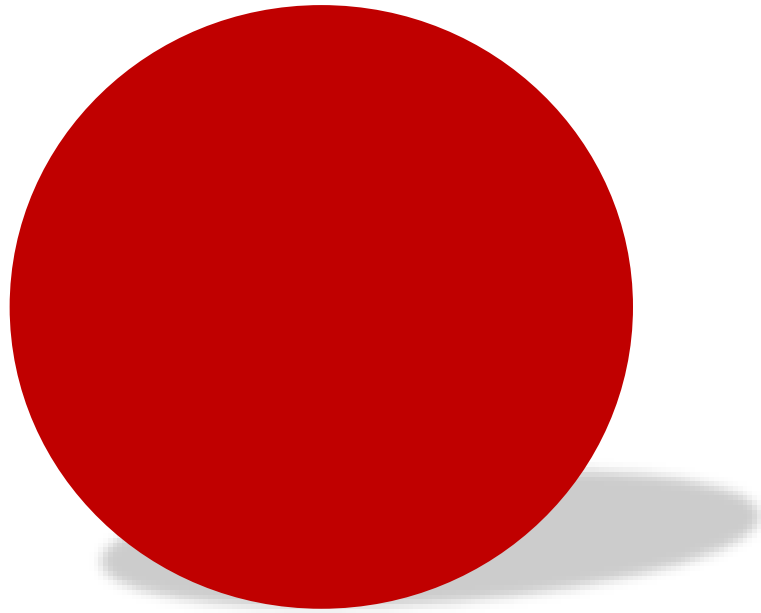
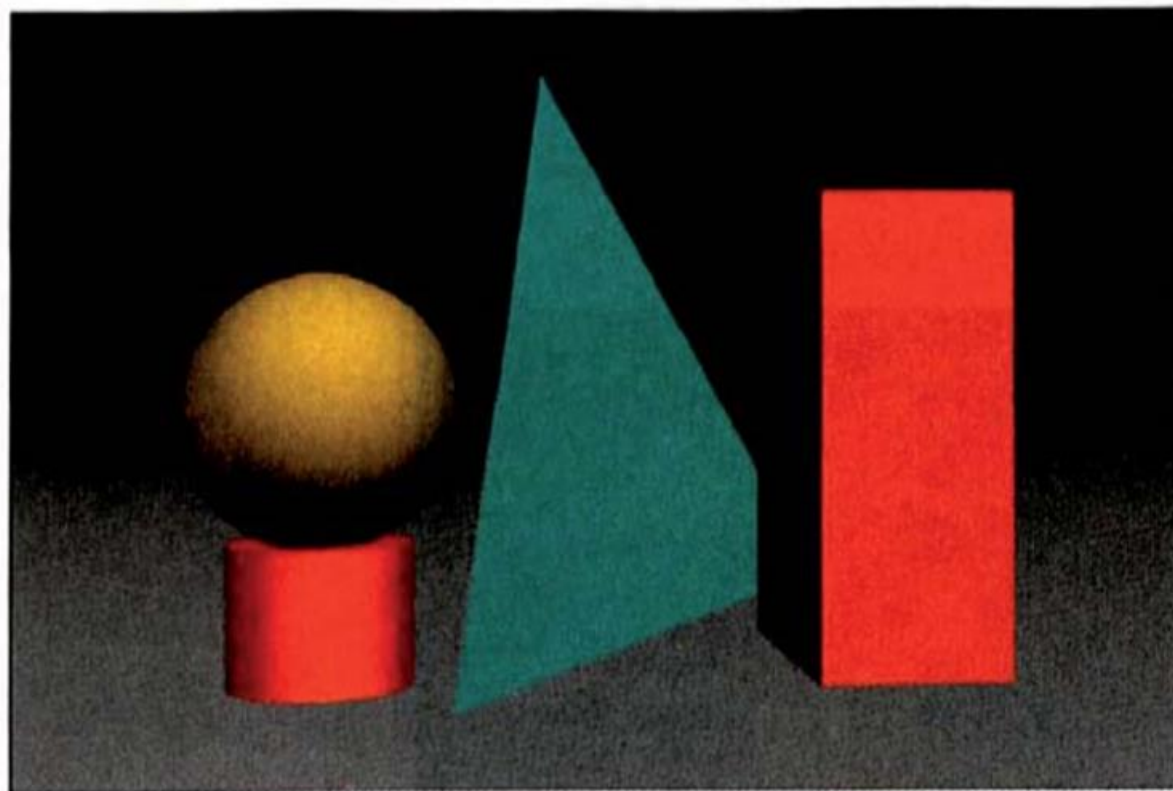
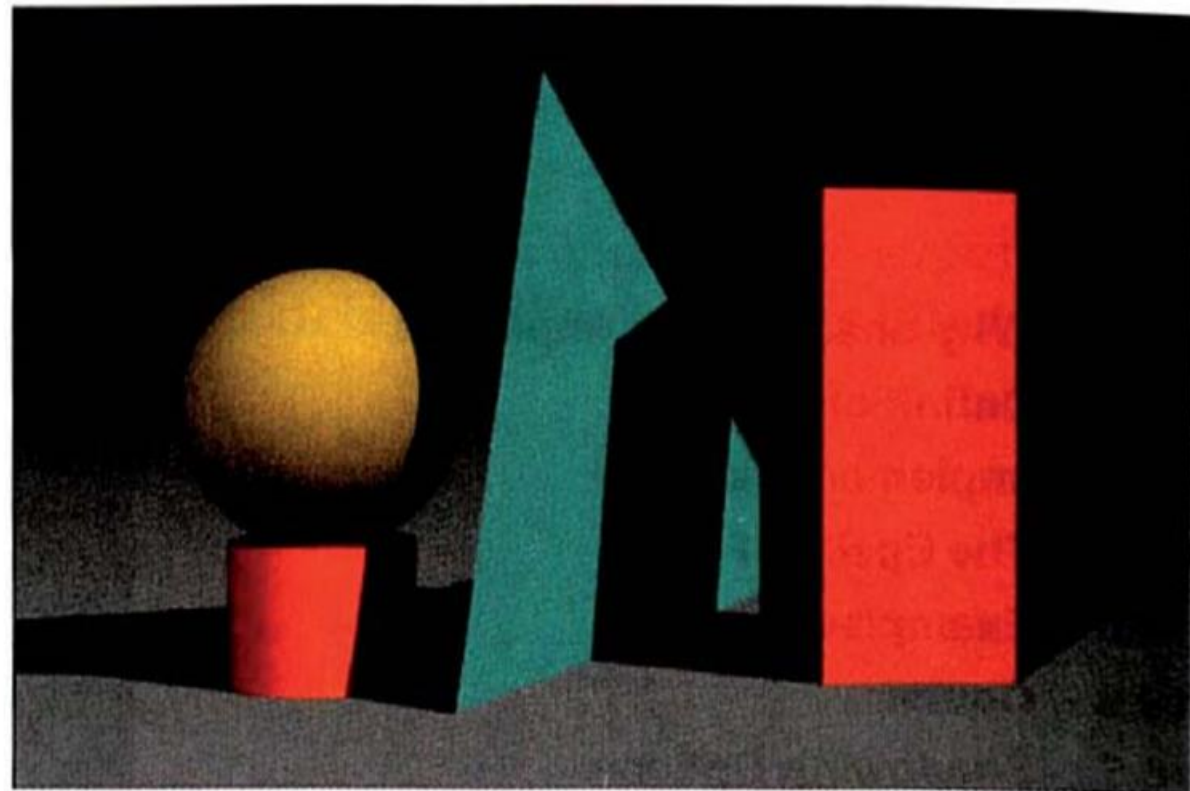


Shadow



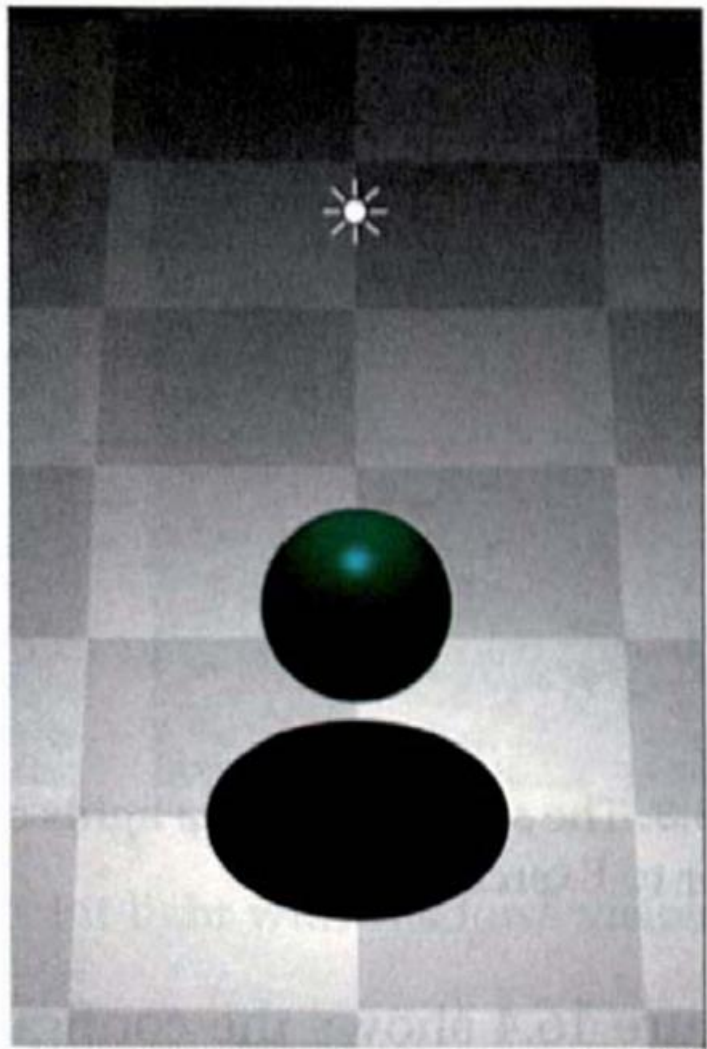
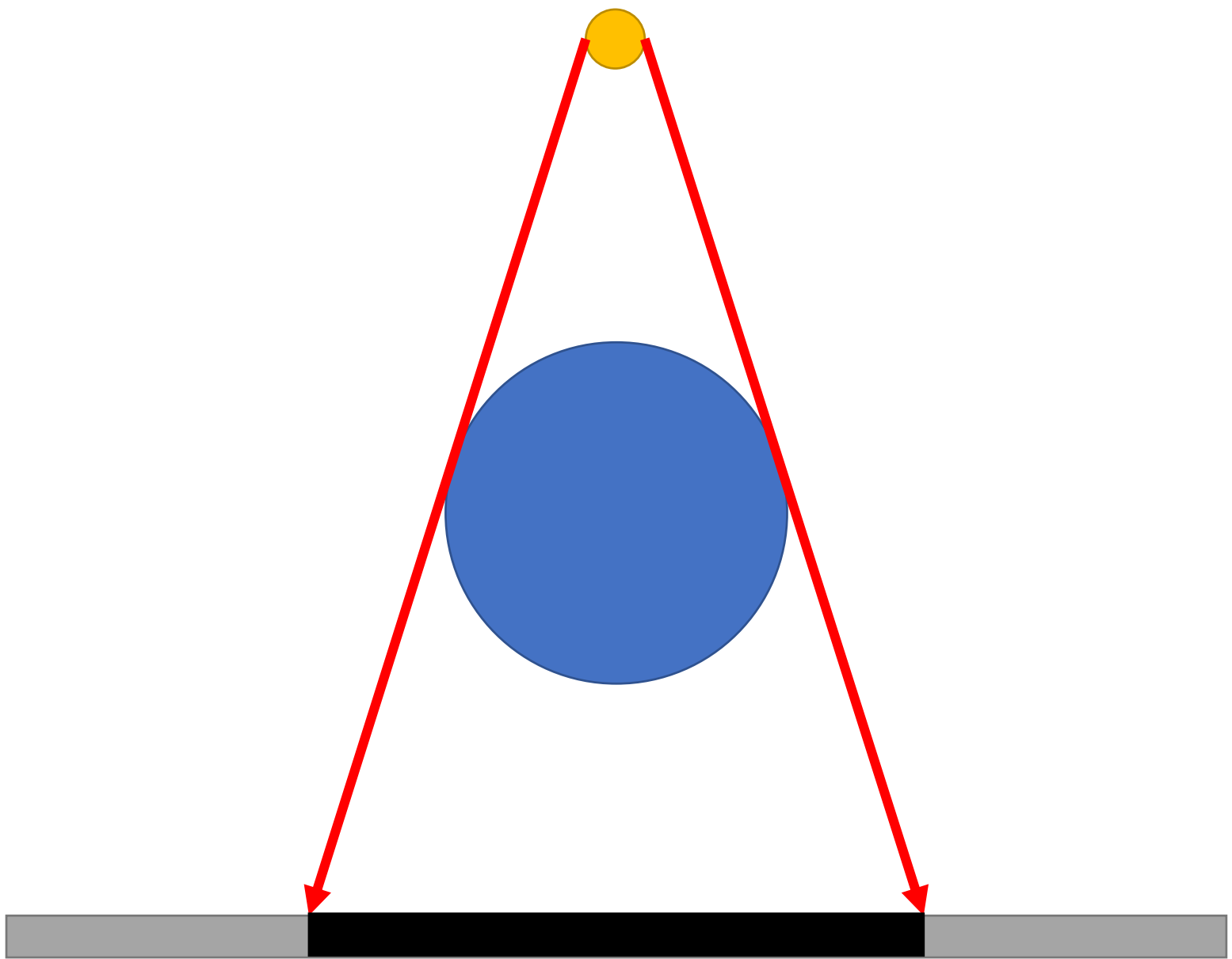


(a)

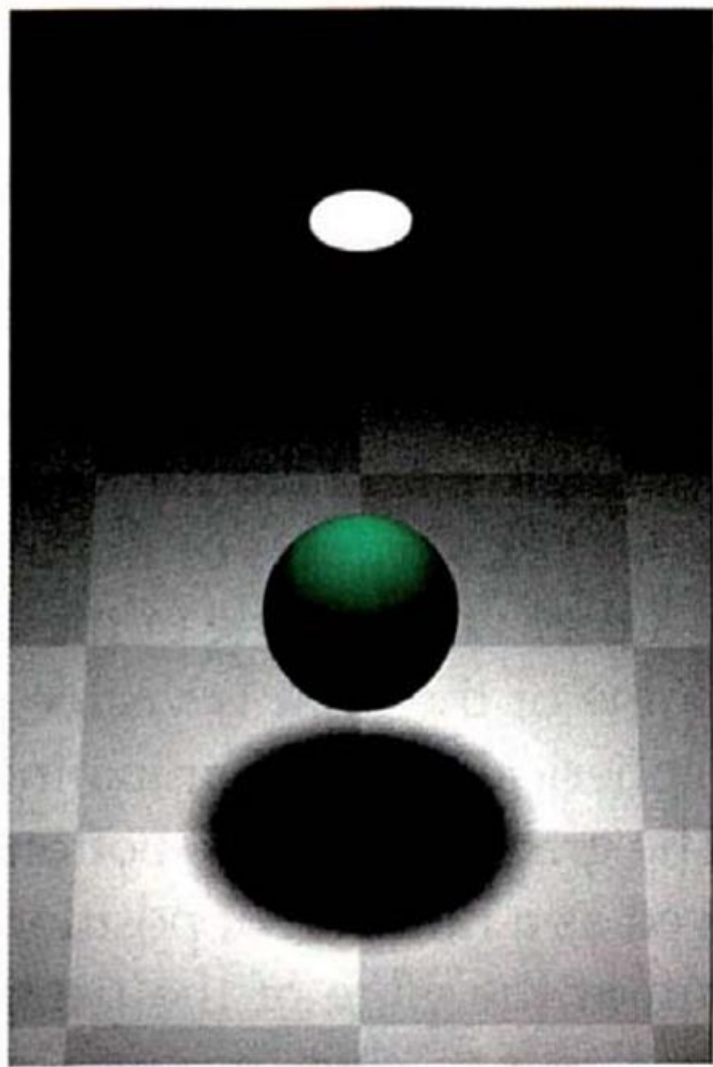


(b)

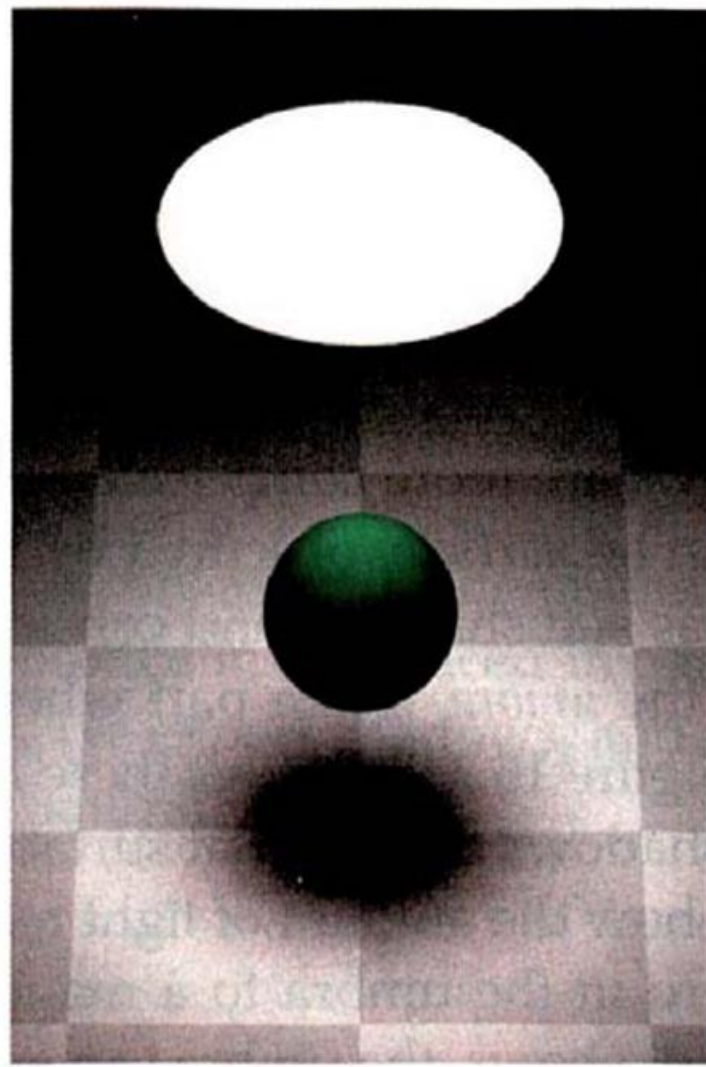
Figure 16.1. A simple scene illuminated by a point and a directional light: (a) with no shadows; (b) with shadows.



(b)



(a)



(b)

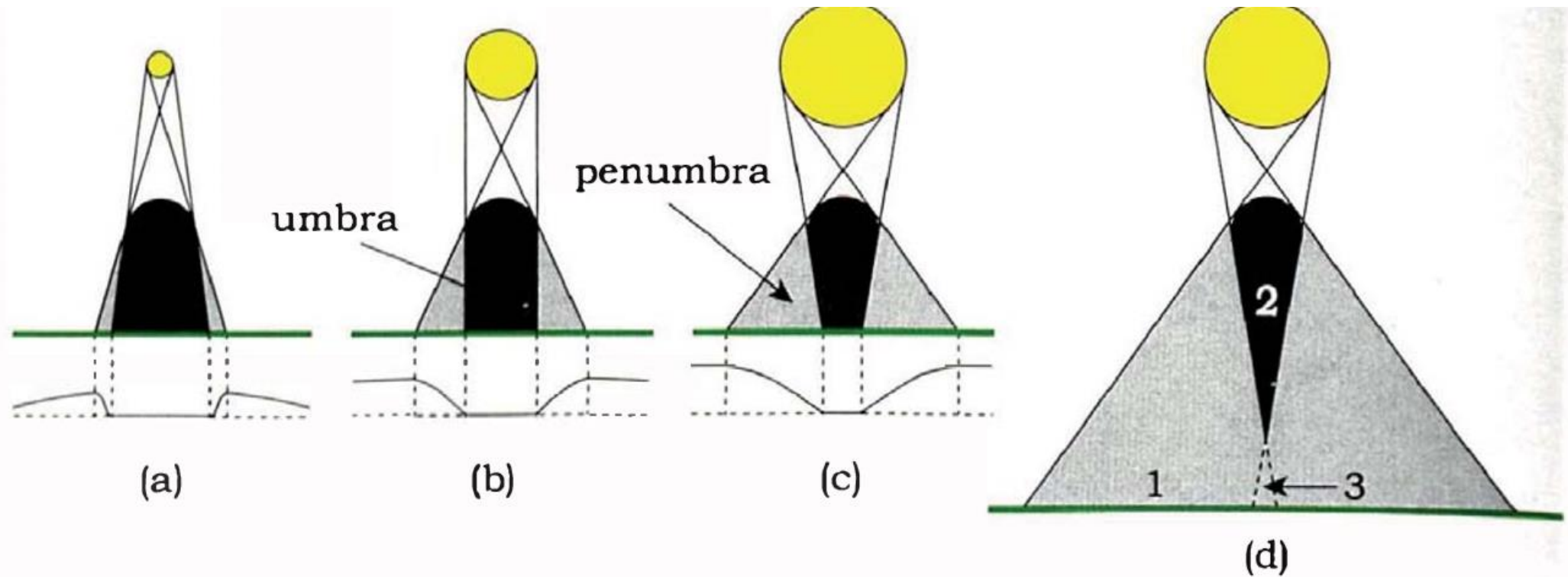


Figure 16.3. The shadows of area lights consist of an umbra and a penumbra. The numbers in (d) refer to Exercise 16.1.

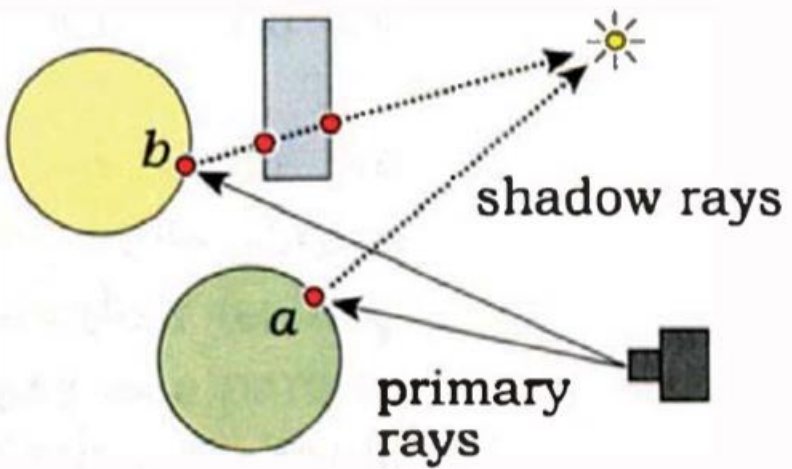
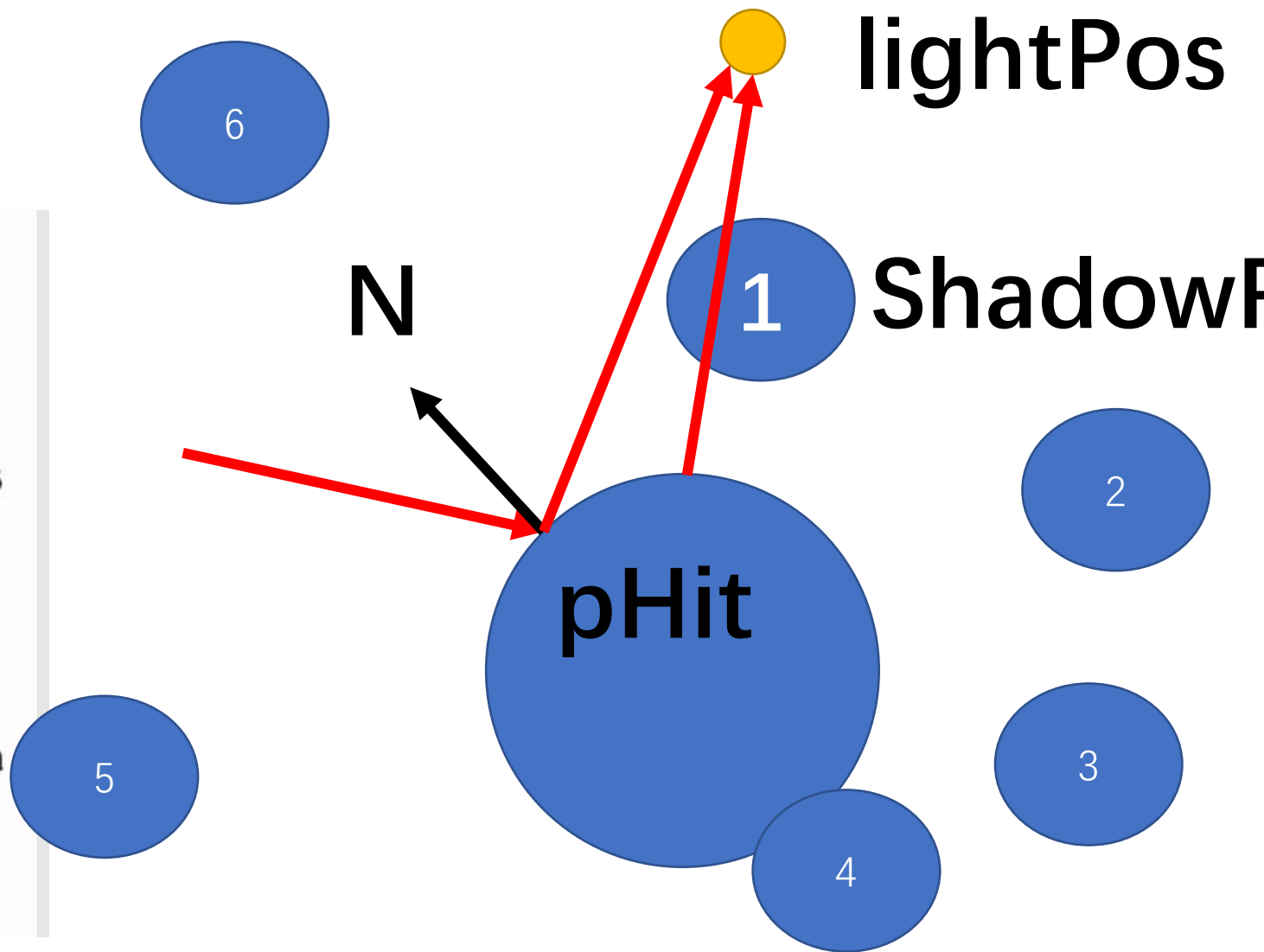
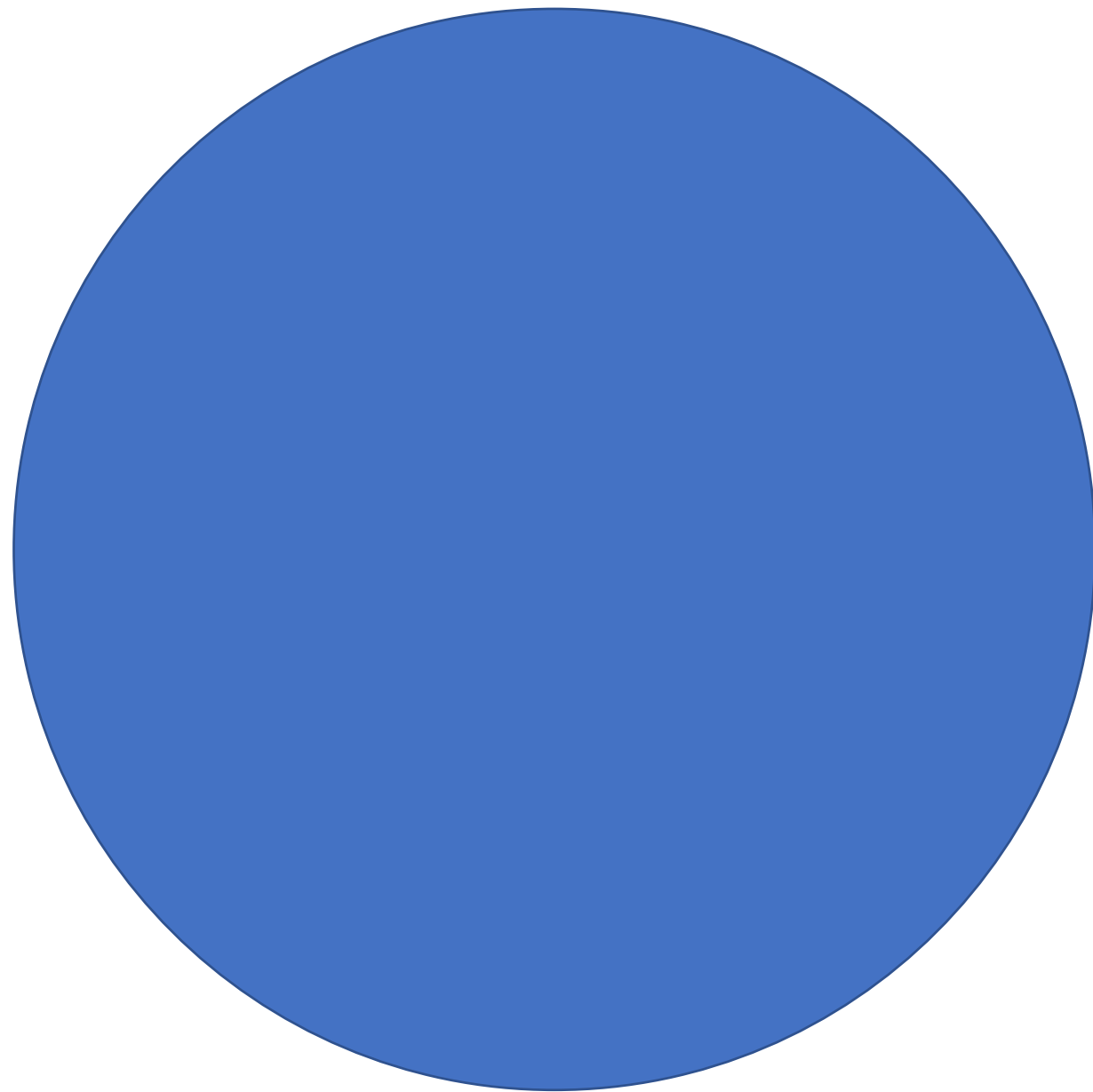
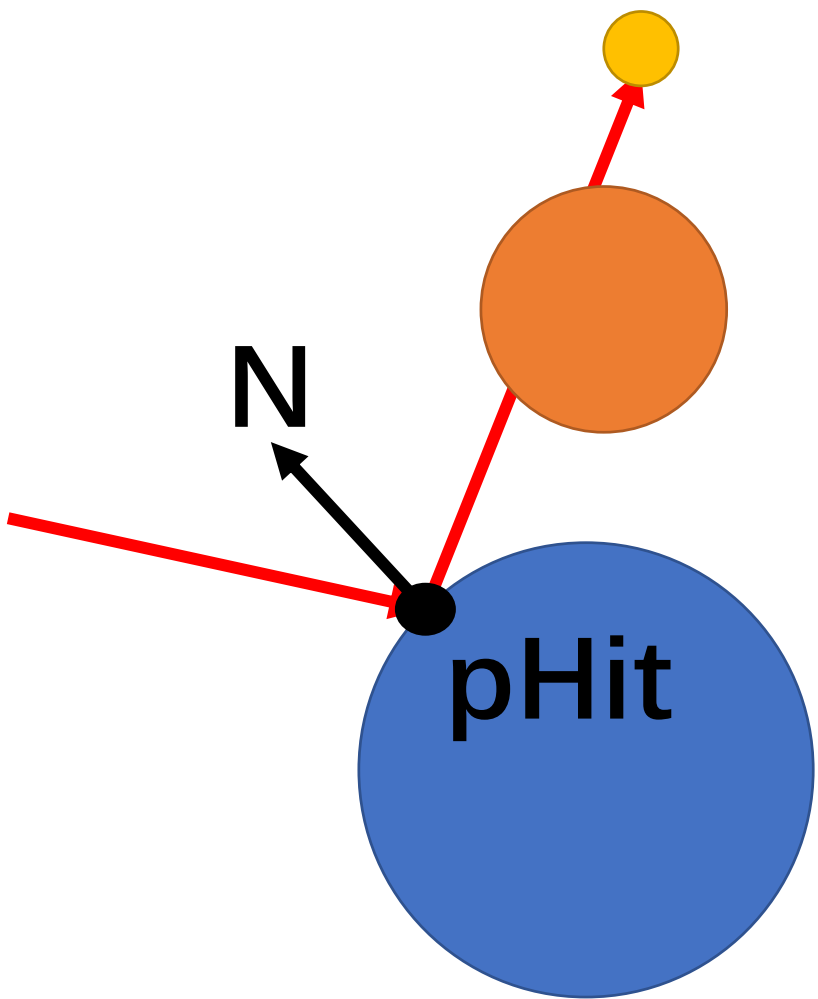


Figure 16.6. Shadow rays for a point light.





kEpsilon = 1e-5

N

t

$$P = O + t * d$$

