

Homework Set #6

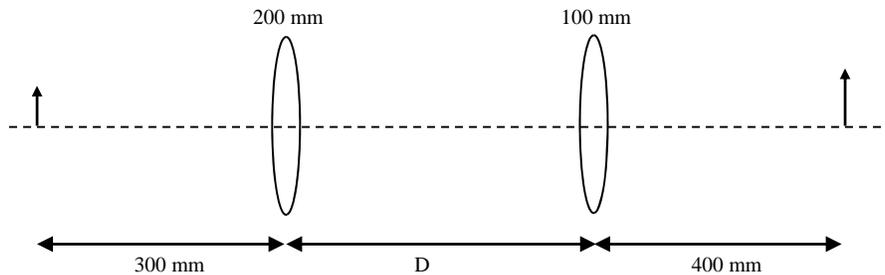
Due: 5-7-12

Unless I indicate otherwise, optics figures on homework assignments and exams are not to scale.

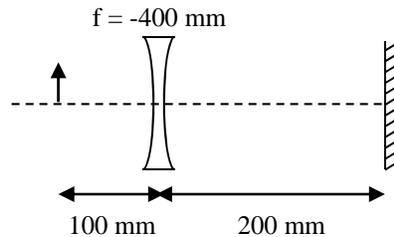
(1) text 4.3

(2) text 4.8

(3) Two +200 mm lenses are a distance D apart. An arrow and its image, both pointing up, are shown in the figure. (a) Find D . (b) What is the system magnification? (c) Provide figures with ray tracing similar to those demonstrated in class.



(4) An arrow is in front of a lens and plane mirror as shown. (a) Find the location of the arrow's image. Specify the image distance with respect to the lens and indicate whether the image is to the left or the right of the lens. (b) What is the magnification of the system?



(5) Repeat problem (4), but with the following changes: the lens has $f = +300$ mm, the plane mirror is a curved mirror with $f = +200$ mm.