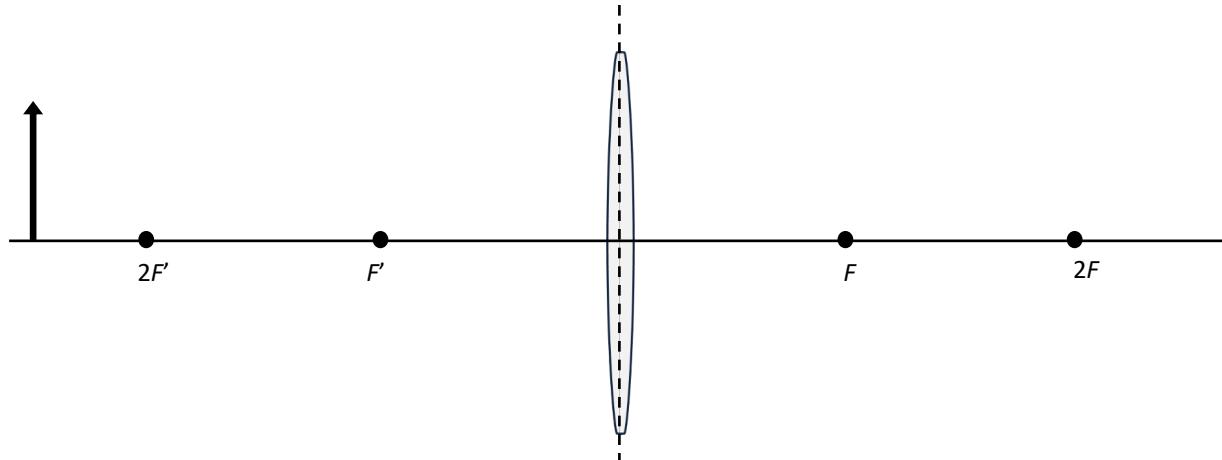


Provide a ray diagram for a camera. Label each of the following: h_o , h_i , d_o , d_i , and f .



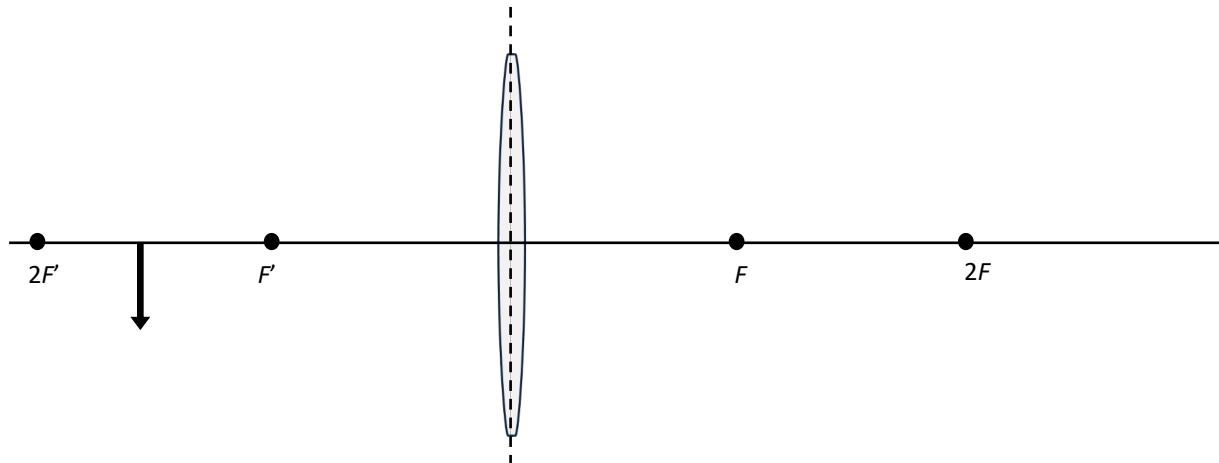
If the camera represented in the ray diagram above is focused on the object, locate and draw the digital sensor.

What part of the camera moves to focus on the object?

As the object moves closer to lens, what happens to the height of the image?

What function does a lens have with a camera?

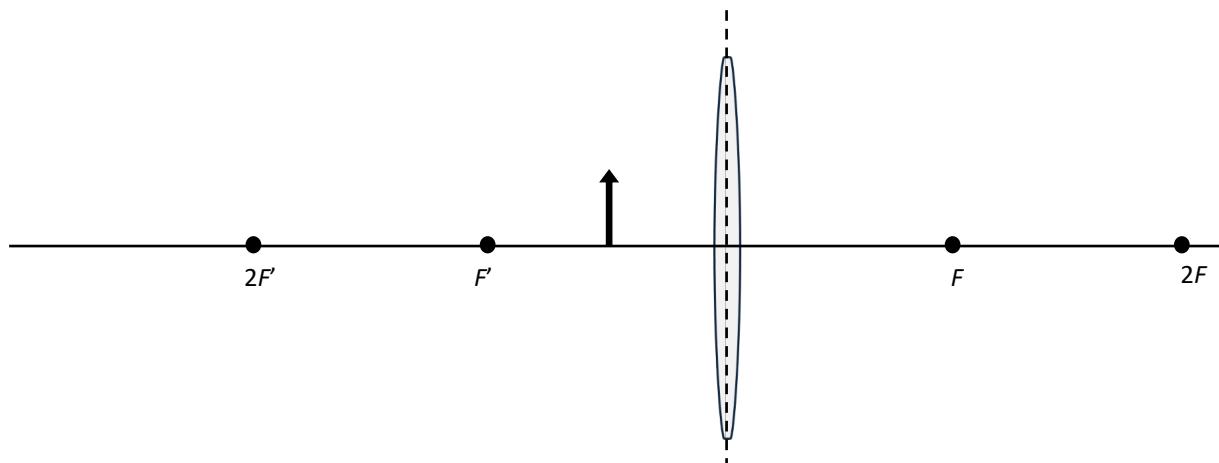
Provide a ray diagram for a projector. Label each of the following: h_o , h_i , d_o , d_i , and f .



If the projector represented in the ray diagram above is focused, locate and draw the projector screen.

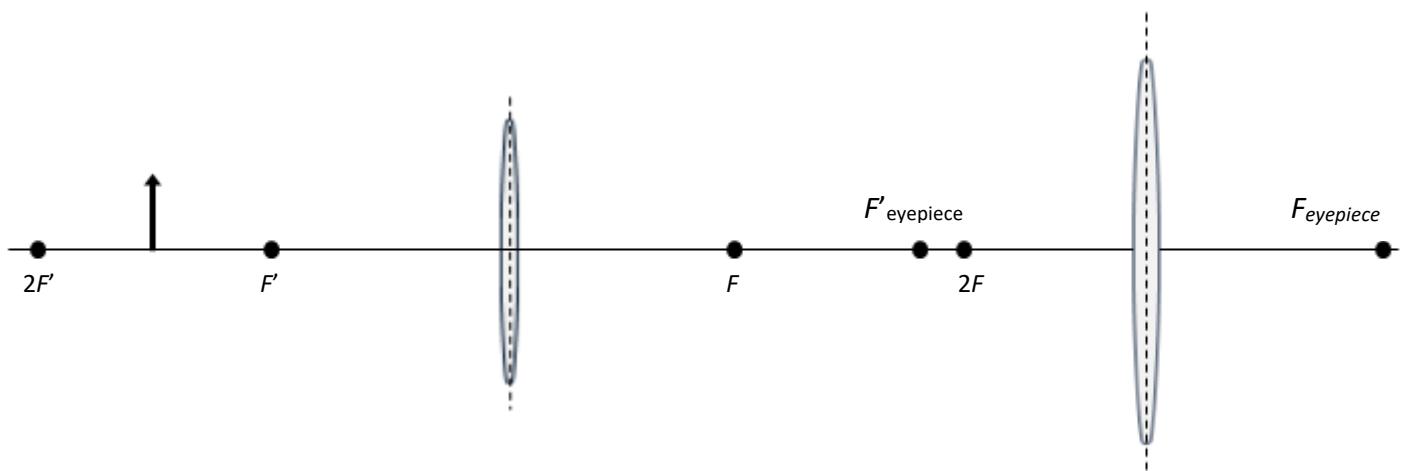
What are the similarities and differences between a projector and a camera?

Provide a ray diagram for a magnifying glass. Label each of the following: h_o , h_i , d_o , d_i , and f .



What are the similarities and differences between a projector and a magnifying glass? Will this affect the value of d_i ? In what situations would a magnifying glass be preferable?

Provide a ray diagram for a compound lens. Label each of the following: h_o , h_i , d_o , d_i , and f for each of the two lenses.

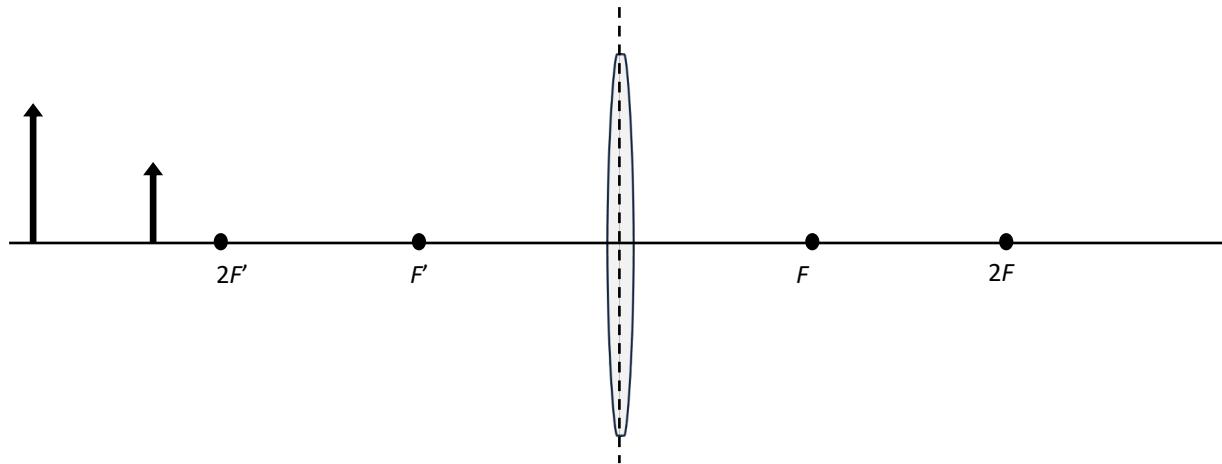


What type of image is produced by each of the two lenses? Is the order significant?

How is the magnification of an image calculated using a compound microscope?

Answer the following questions:

Demonstrate how the camera can only be focused on one of the two objects at one time.



For a camera to focus on a second object further back, should the lens move toward the object or backwards (further into the camera)? Explain your answer. (Hint: Draw some more ray diagrams.)

What types of images can cameras use to capture images? Explain your answer.

A designer of compound microscopes has decided to reverse the objective lens and the eyepiece lens in an attempt try a new approach. Explain a likely outcome and why it would or would not work.

Homework: pg. 570 #1-8