

Q: will you accept it without the optics workbench screen captures?

A: Yes. This new version of the optics workbench turns out to be smaller than what I have previously used. Next time around I'll modify the lab to accommodate that.

Q: Is there any way to expand the optics workbench's visible field? The image in the lab instructions (and the numbers given with it) put the object reflection off-screen.

A: I believe (at least it works for me with linux and firefox): hold the control key and rotate the mouse wheel.

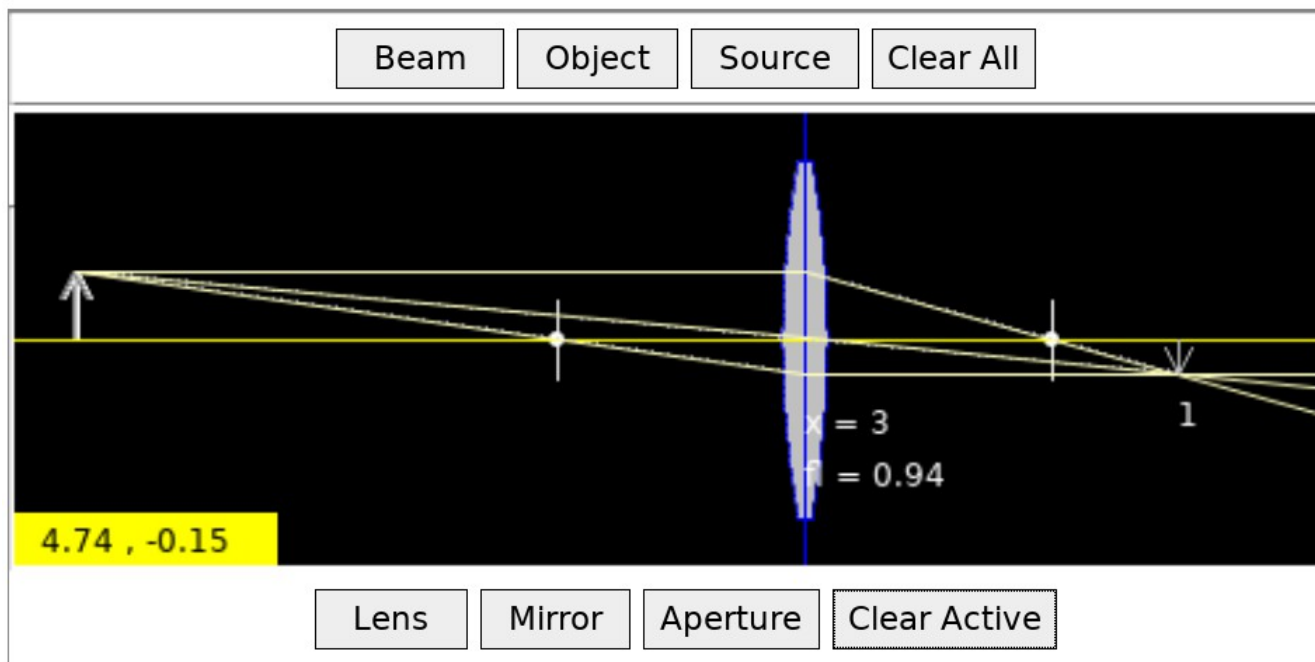
A: Also divide the numbers by 10 since they need to scale down to the scale of the optics workbench.

A: This version of the optics workbench is actually a little bit smaller than the other version. So you may move the lens to 3 to see where the image is located.

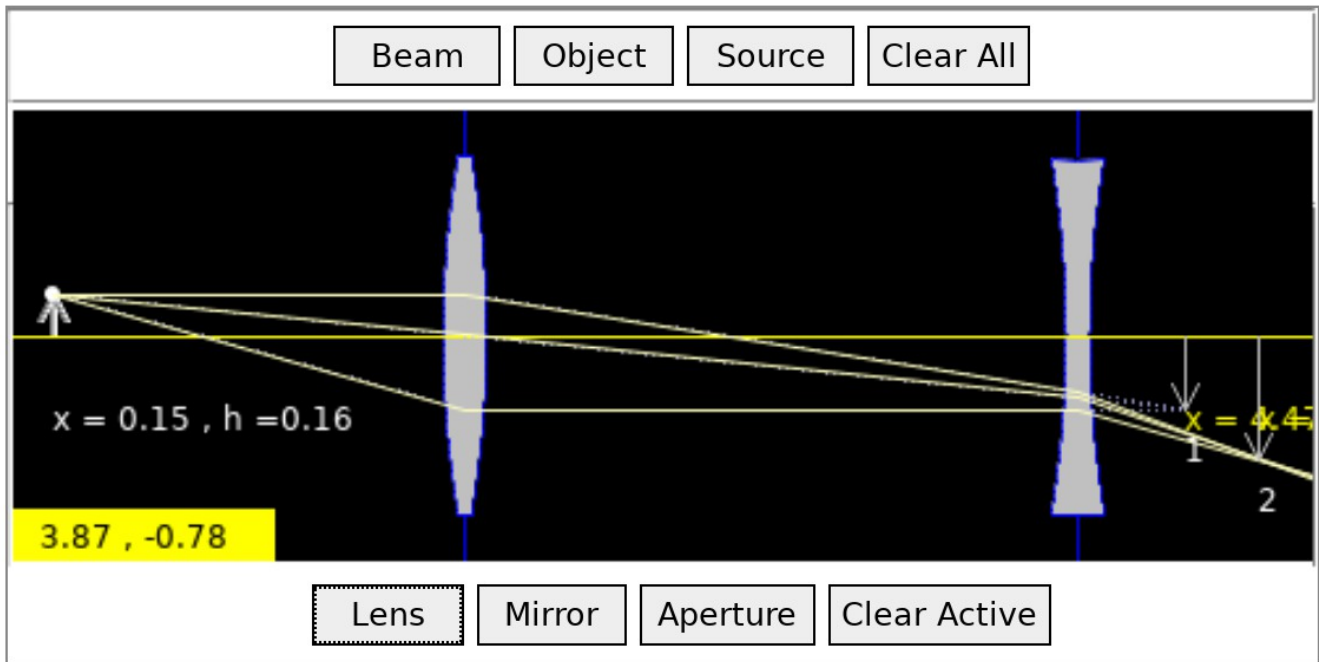
Place a relatively small object at 0.15

Now move the lens to 3.00. Notice where the image is located. You will see that the image is outside the focal length, it is inverted and reduced.

here is my setup for the first part.



Moving the lens around you will see the image moves towards the object and then reverses direction and moves away as the lens is moved closer to the object.



Also here is one of my setups for the second part. It is a bit hard to see it but the image 2 is shown.

I have made a bit of a modification in the lab procedure for this part since this javascript version is a bit shorter in scale than what was used in the lab previously. There are also applets that you can obtain for cell phones that can do similar calculations.