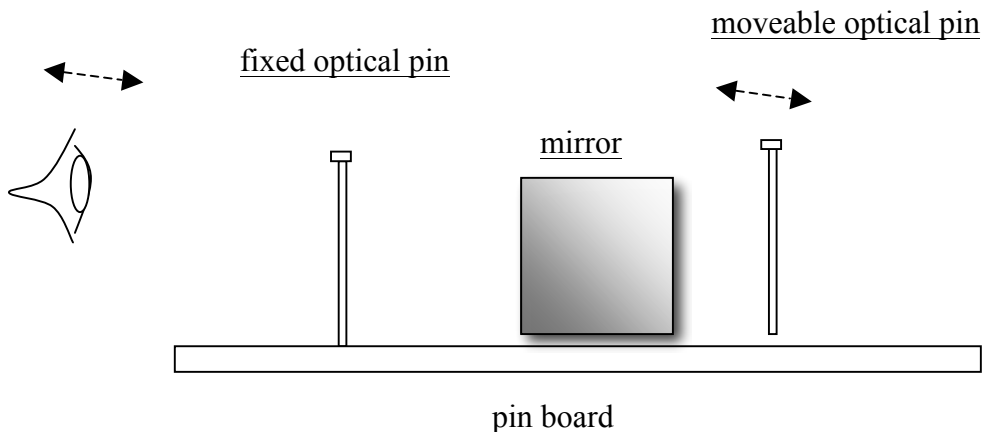


Experiment: Finding the Position of a Virtual Image:

1. The plane mirror:

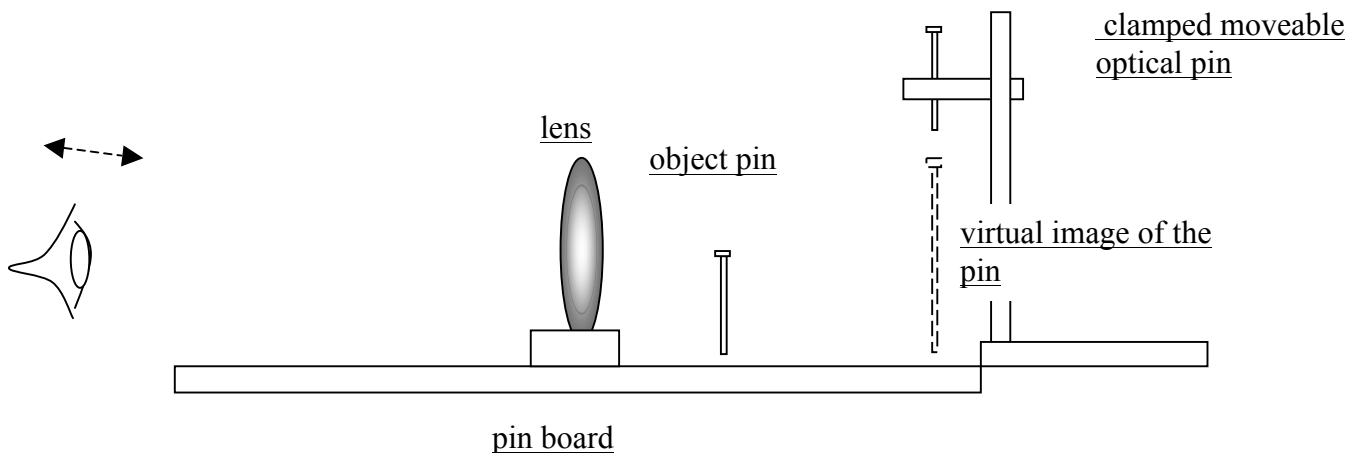
The image visible in a plane mirror appears behind the mirror. it is a virtual image. You will find its distance by **parallax**.



- Place a fixed pin in front of the plane mirror. Place a second pin behind the mirror so that the top of the pin can be seen superimposed over the reflection when the eye is in line.
- Keep only one eye open and move the eye from side to side.
- Generally the reflection in the mirror will appear to move out of line with the pin behind the mirror.
- Place the pin at different distances until the image in the mirror and the pin behind the mirror always coincide when the eye is moved.
- Measure the distance of the object pin and the pin behind the mirror which is now at the distance of the virtual image within the mirror.

2 The Converging Lens.

The process is similar to the plane mirror though more difficult to do accurately. .The object pin must be placed a distance from the lens which is less than its focal length.



Look through the lens.

The virtual image of the pin can be seen.

- Using the parallax principle move the eye from side to side .
- Move the clamp and pin until the pin can be seen superimposed above the virtual image.
- The angle is limited as the edge of the lens tends to distort the image.
- Measure the distance from the lens axis to the object and to the virtual image.
- Calculate the focal length of the lens using the lens formula.