

Answer on Question #46568 – Physics – Other

Which of the following precautions is NOT applicable to experiment involving planoconvex lens?

planoconvex lens should have small focal length
parallax error should be avoided
the surface of the lens should be cleaned properly
the tip of the optical pin should be at the same level with the principal axis of the lens

Solution:

Sources of error and precaution in experiment involving planoconvex lens:

1. Glass plates and lens should be cleaned thoroughly.
2. The lens used should be of large radius of curvature.
3. The sources of light used should be an extended one.
4. Tip of the optical pin should be focused on a lens tangentially, thus it should be at the same level with the principal axis of the lens to avoid parallax error
(Parallax error occurs when the measurement of an object's length is more or less than the true length because of your eye being positioned at an angle to the measurement markings)

Hence, «planoconvex lens should have small focal length» is not applicable to experiment involving planoconvex lens

Answer: planoconvex lens should have small focal length