General Aim
Determination of focal length and the power of lens.

Method
General method

Learning Objectives (ILOs)
- Understand the image formation for a convex lens.
- Understanding the difference between both the focal length and power of a lens and how to determine them.

Theoretical Background/Context
Rays coming from very far away are practically parallel. If such rays are also parallel to the main axis of the lens, the image forms at \( f \), the focal point of the lens will be real and inverted.

General method implies, the relation between the object distance \( p \), the image distance \( q \), and the focal length \( f \) is given by the thin lens formula as

\[
f = \frac{pq}{p + q}
\]

And the power of this lens will be obtained from

\[
F = \frac{100}{f} = \frac{100}{p + \frac{100}{q}}
\]

Principle of Work
Finding the focal length and the power of the lens through changing the distance between screen lens according to the distance between object and lens.