

**PHYSICS**  
**FORM 5**  
**LENSES II**

**Terminology**

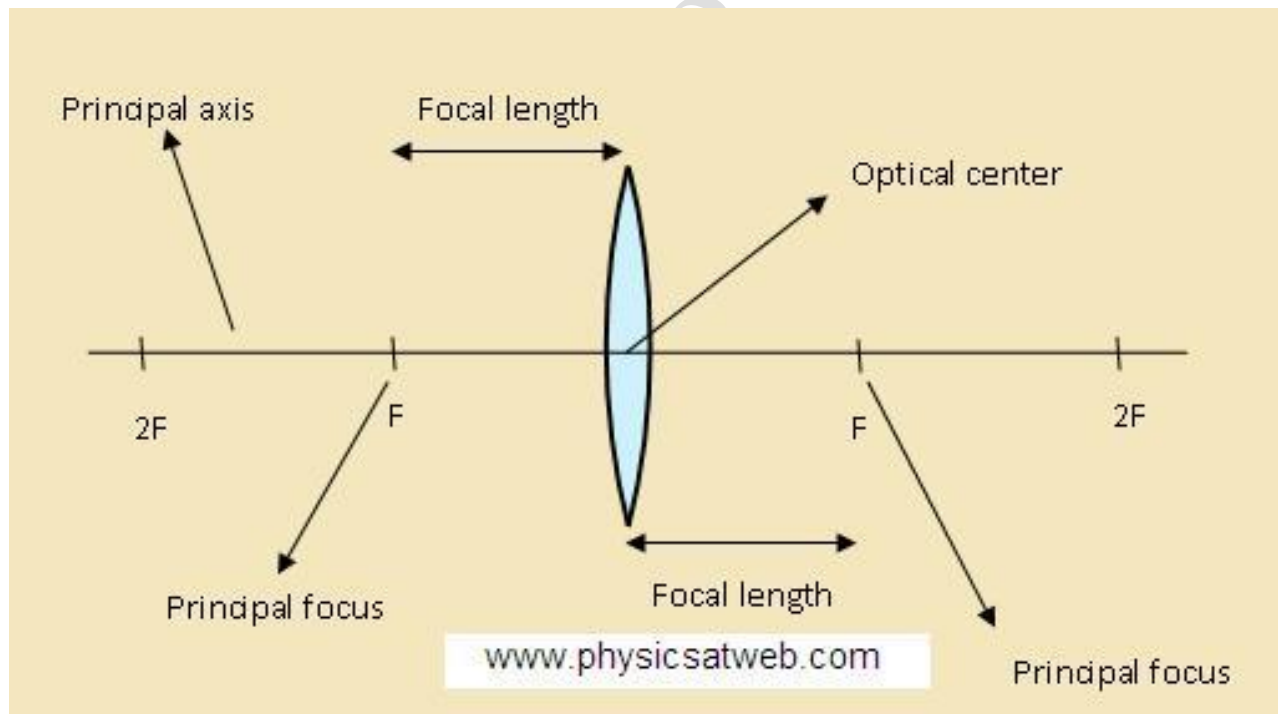
**Principal axis:** A line which passes through the center of the lens, perpendicular to the lens surface. (Lines X-Y in the diagrams on the left illustrate the principal axes of the lenses.)

**Optical centre:** This is a point on the principal axis of a lens through which light passes without undergoing any deviation. In other words, a ray of light passing through the optical center will not change its direction. For thin lenses whose faces have the same curvature, this point, marked **O** in the diagram, is in the center of the lens.

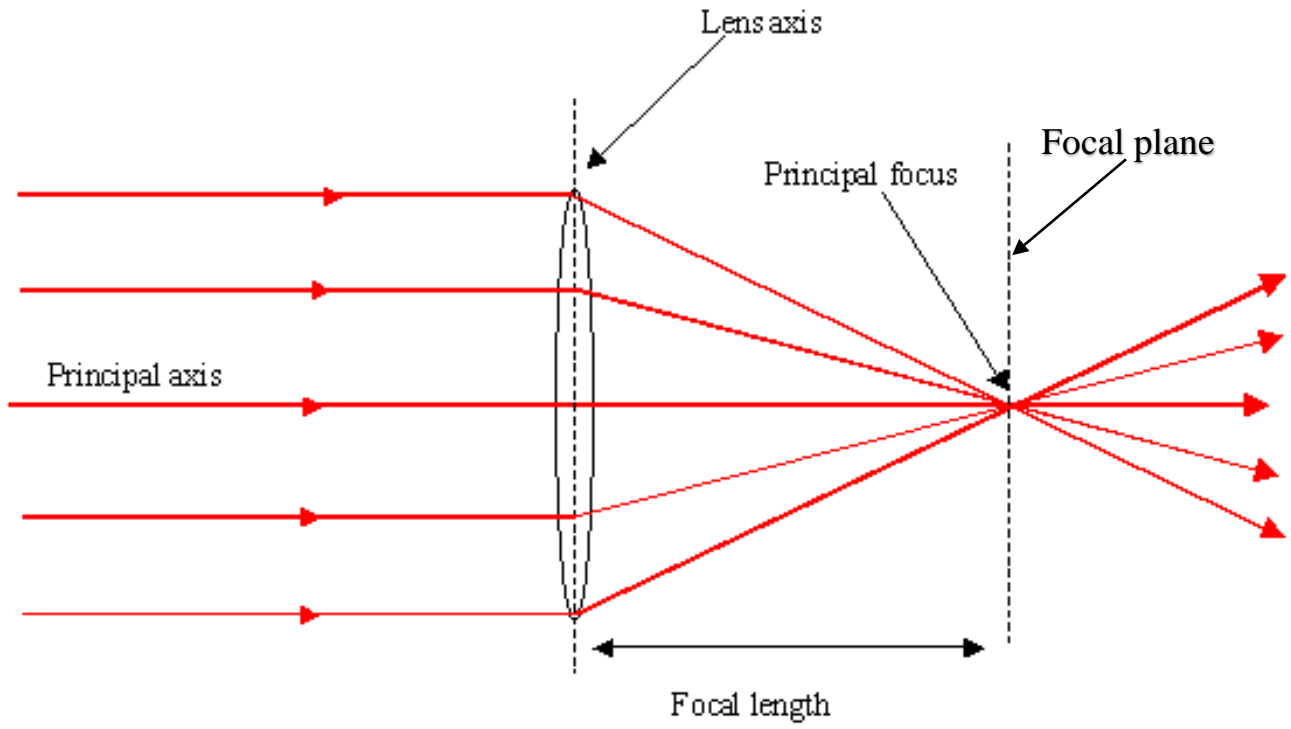
**Principal focus or focal point:** This is a point, marked **F** in the diagram, to which all rays parallel to the principal axis converge (in the case of a convex lens), or (in the case of a concave lens) from which the rays appear to diverge.

**Focal length:** This is the distance between the optical centre and the principal focus. In the diagram, it is the distance **OF**.

**Principal focal plane:** An imaginary plane located at the principal focus, perpendicular to the principal axis.



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