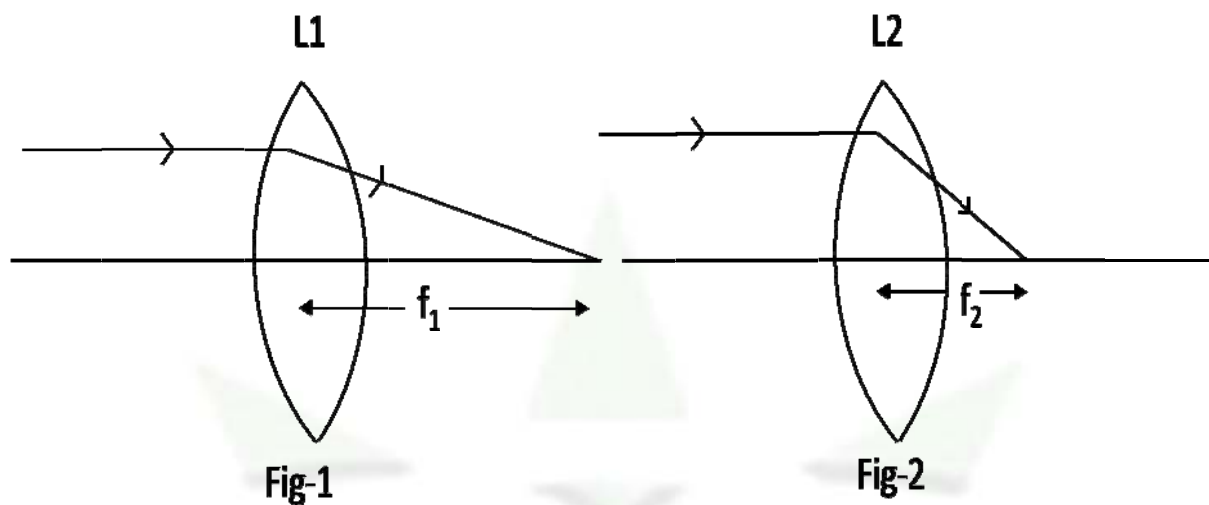




Power Of Lens

Power of lens:



Comparing the two figures, we see that the converging power of lens L2 is greater than that of lens L1, but focal length of lens L2 is smaller than that of lens L1. Hence we conclude that the power & focal length of a lens are inversely related i.e. when one is greater than other is smaller.

$$p \propto \frac{1}{f} \text{ or } p = k \frac{1}{f} \text{ where } k \text{ is constant of proportionality.}$$

The value of k depends on choice of unit, if f is measured in DIOPTR $k=1$ $p = \frac{1}{f}$

Since focal length of a convex lens is positive, the power of a convex lens is also positive. The focal length of concave lens is negative hence the power of concave lens is also negative.