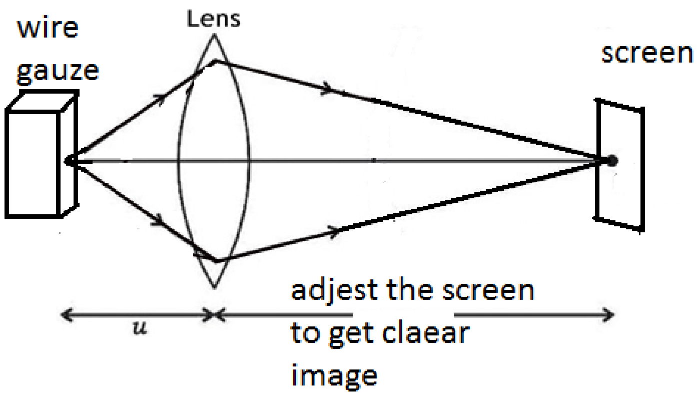
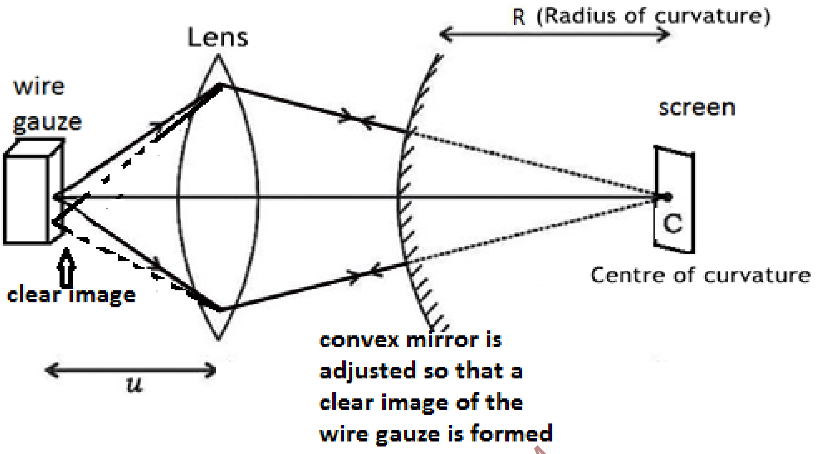
Step 1



Step 2



Observations and Calculation

Trial no.	Distance between Convex lens and wire gauze u in cm	Distance between screen and mirror R in cm	Focal length $f = \frac{R}{2}$ in cm	Mean f in cm
1				
2				
3				
4				
5				
6				

Focal length of the convex mirror, **f** = ... cm

=................ m

CONVEX MIRROR

AIM

To find the focal length of a convex mirror

APPARATUS

Convex Mirror, convex lens , Illuminated wire gauze, meter scale , lens stand, white screen.

THEORY

In a convex mirror, reflection take place from outer curved surface. The distance between its principle focus and pole is called focal length. IF f is the focal length and **R** is the radius of curvature then **f =** $\boldsymbol{\frac{R}{2}}$

PROCEDURE

Convex lens is placed at a suitable distance u. Then adjust the screen. A magnified image of the illuminated wire gauze is obtained on the screen by using a convex lens. Then the convex mirror is placed in between the screen and the lens with its reflecting surface towards the object. The position of the convex mirror is adjusted so as to get the clear image side by side of the wire gauze. The distance between the convex mirror and the screen is measured and this distance is equal to the radius of curvature. The experiment is repeated by changing distance between object and convex lens. From the value of R , focal length is calculated. And mean focal length is calculated

RESULT

Focal length of the convex mirror, **f** = ……………. m