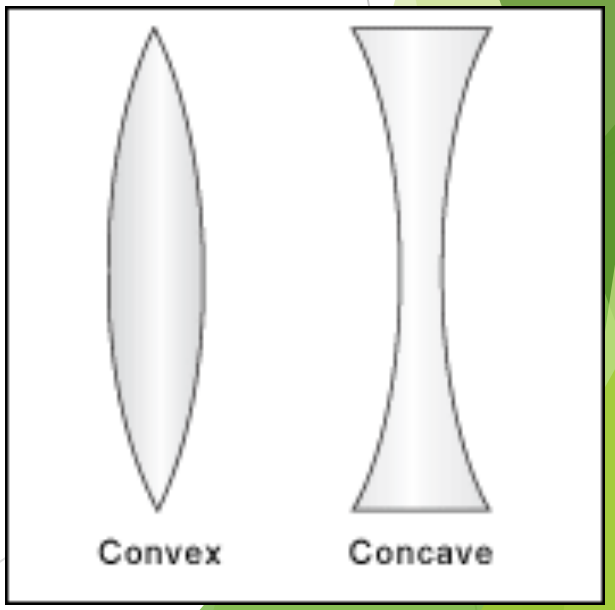
Lenses

Light can pass through lenses.

Since lenses are made of glass, how many refractions do you think there will be?

Lenses are curved piece of transparent material that will converge or diverge parallel light rays.

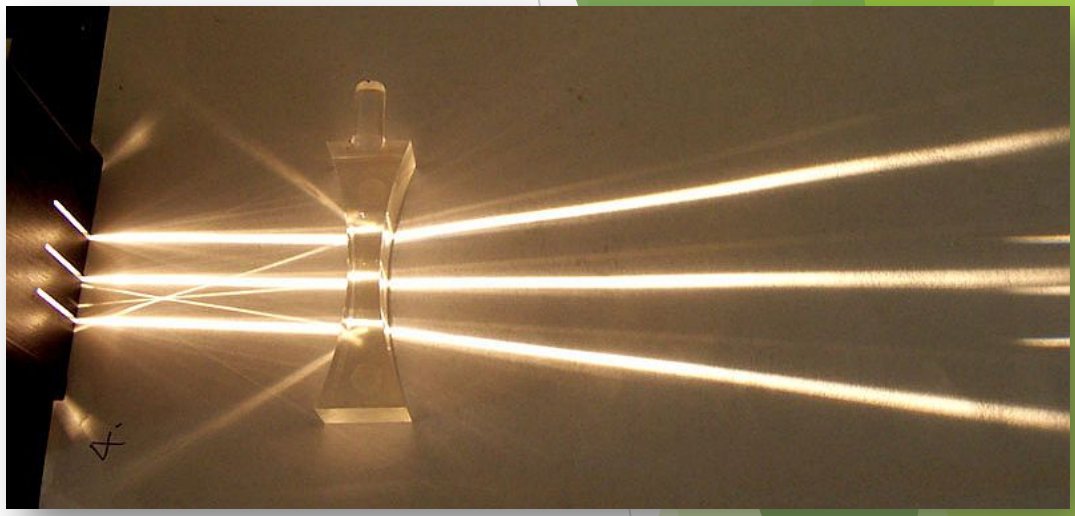


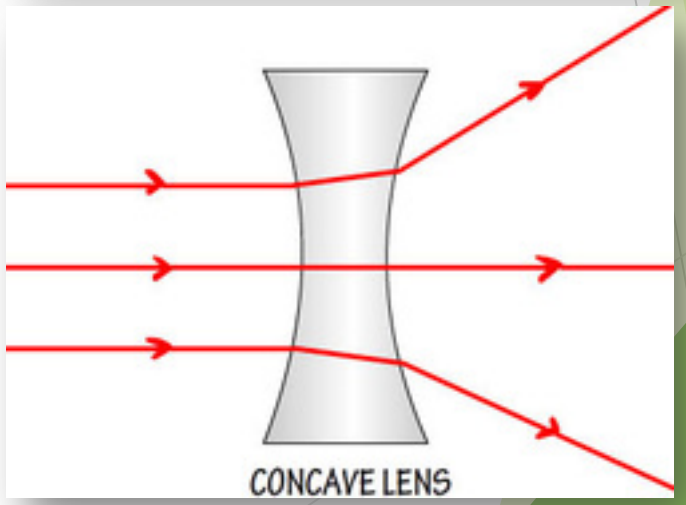
Concave Lenses

Concave lens is thinner at the center (as if there were caves on either side of the lens).

Light rays will diverge as they pass through the lens.

Image formed will be upright but smaller than the actual object.

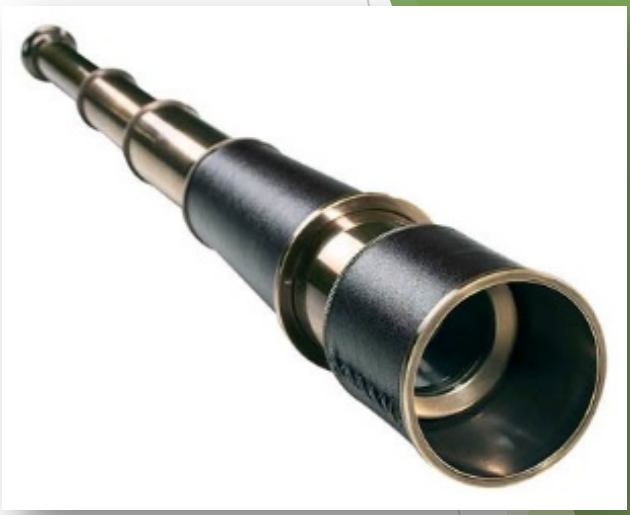




Concave Lenses

Concave lenses are used to make

- Some eye glasses
- Some telescopes
- And spy glasses

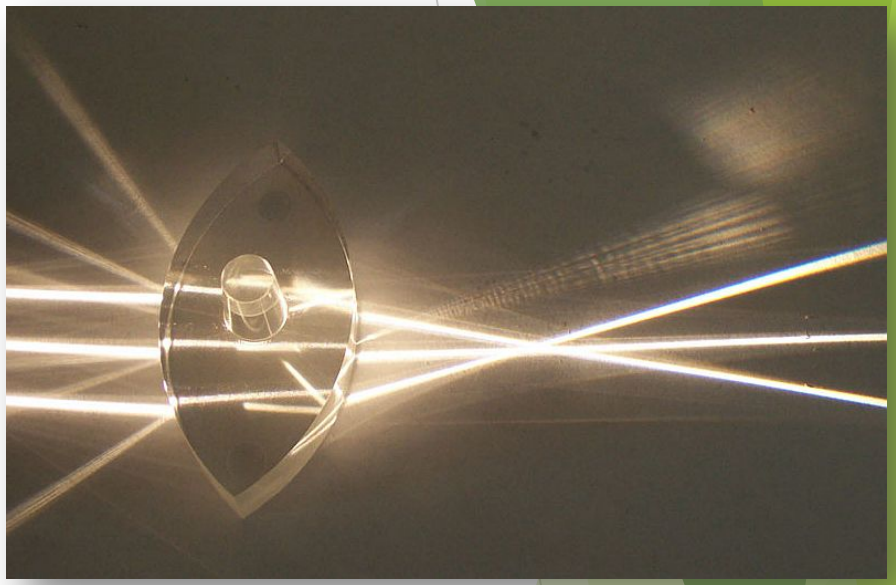


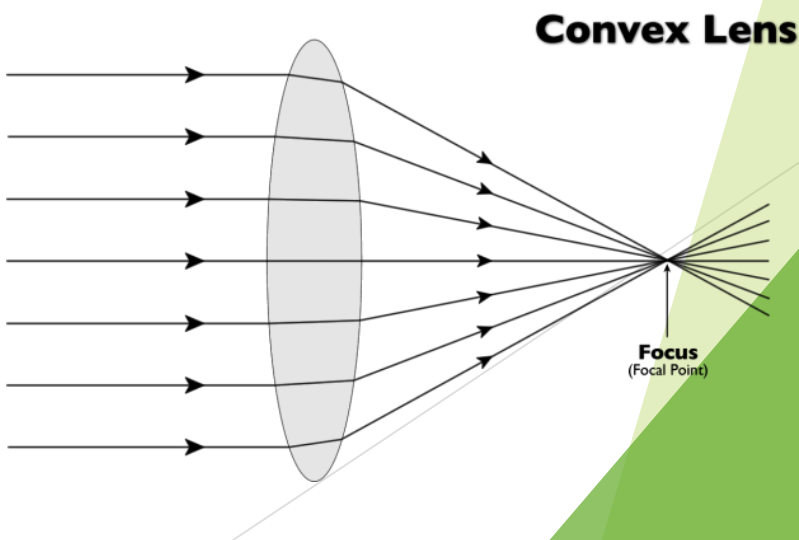
Convex Lenses

Convex lens is thicker at the center

Light rays will converge as they pass through the lens.

Image formed will depend on the distance of the object from the mirror.





Convex Lenses

Focal length: distance from the center of the lens to the focal point.

If the object is farther away than the focal point, then the image will be small and inverted (upside down).

As it comes closer (towards the focal point), image will get larger and larger.

Convex Lenses

However, if the object gets closer to the lens than the focal point…

The image will be large but upright (right side up).

Convex Lenses

Convex lenses are used to make

- Magnifying glass
- Microscopes
- Some eye glasses
- Overhead projectors