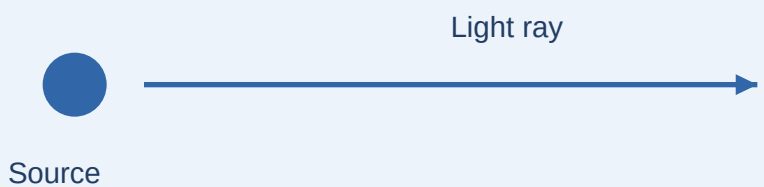
Follow the light

A ray describes the direction in which light travels.

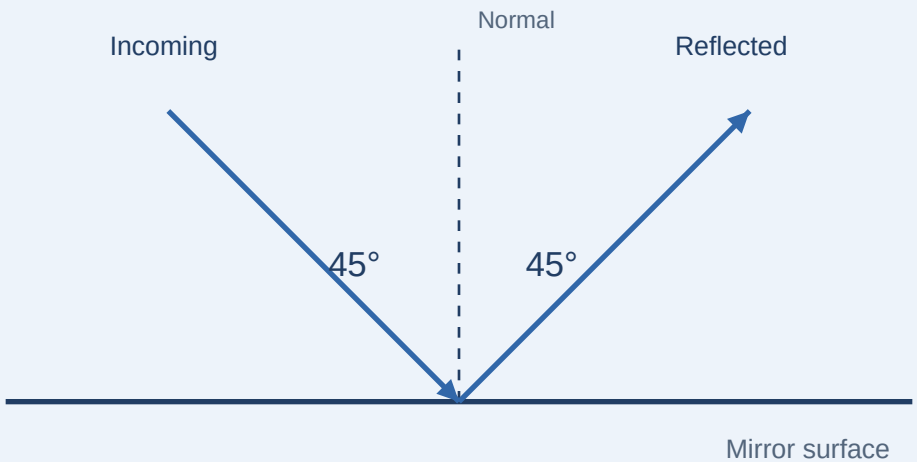


A useful starting point

In a uniform medium, light travels in straight lines. Ray diagrams let us follow its path and reason about what changes when it reaches a surface.

When light reflects

Measure each angle from the normal, not the surface.

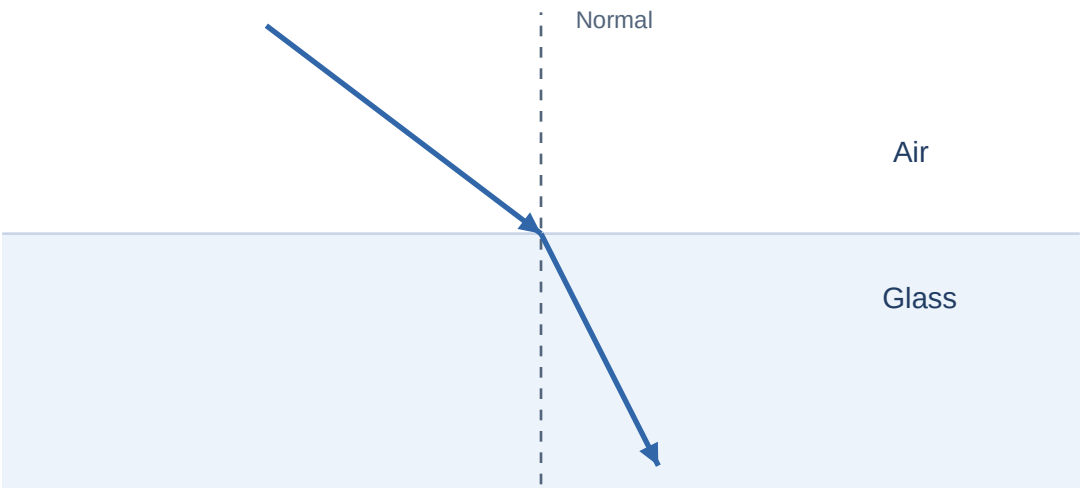


Angle in = angle out

The angle of incidence equals the angle of reflection. Both angles are measured from an imaginary line perpendicular to the surface: the normal.

When light refracts

A change of medium can change the direction of light.



A different path

At an oblique angle, light entering glass from air bends toward the normal as its speed decreases.

Reflection bounces back. Refraction passes through.