Geometric Optics

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1 Terms

DEFINITION

Self-luminous.

Having in itself the property of emitting light.

DEFINITION

Speed of Light.

The constant speed at which light travels when emitted from a source, around 300,000 kilometres per second

DEFINITION

Photocell.

An electronic component in a solar panel that produces electric current from light.

DEFINITION

Crookes Radiometer.

A device that converts light energy into kinetic energy by moving a paddle wheel inside a glass jar.

DEFINITION

Diverging Beam.

A beam of light that spreads out from a source at a different angle to other beams from the same source

DEFINITION

Converging Beam.

Beams of light that converge on, i.e. come to a common point, from the same source.

DEFINITION

Parallel Beam.

Beams of light are parallel beams, which are beams that remain equidistant from one another as they are emitted from a source.

DEFINITION

Reflection.

The phenomenon by which light bounces off a substance at a particular angle.

DEFINITION

Diffuse Reflection.

Reflection where the beam being reflected bounces in all directions after being reflected.

DEFINITION

Regular Reflection.

The reflection where the angle of incidence, i.e. the angle that the light hits the reflective substance, equals the angle of reflection.

DEFINITION

Virtual Image.

*An image formed by the **apparent intersection of Rays**.*
*A virtual image **cannot** be formed on a screen.*

2 Laws Of The Reflection Of Light

1. The incident ray, the normal at the point of incidence and the reflected ray all lie in the same plane
2. The angle of incidence is equal to the angle of reflection (i = r)

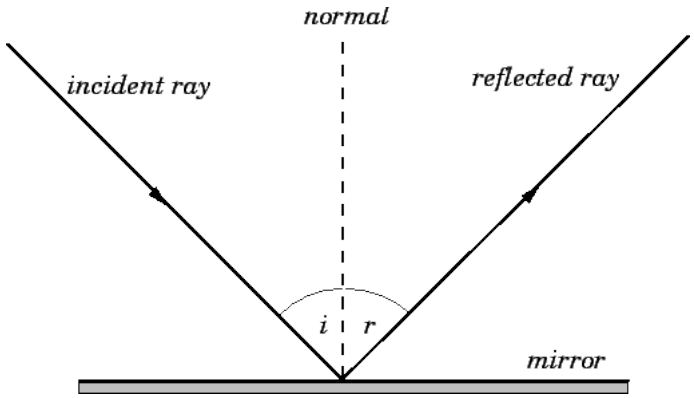

Figure 1: A diagram of the laws of the reflection of light

3 Images in Plane Mirrors

Images in plane mirrors have these properties

- Virtual
- Upright
- The same distance behind the mirror as the object is in front of the mirror