

Reflection of Light

Chapter 11: Reflection of Light · Topic 1

Key Concept

The law of reflection states the angle of incidence equals the angle of reflection, both measured from the normal.

A concave mirror can form real or virtual images depending on object position, commonly used in torches and telescopes.

A convex mirror always forms virtual, diminished, upright images, commonly used in vehicle side mirrors for a wider field of view.

The mirror formula, $1/v + 1/u = 1/f$, relates object distance (u), image distance (v), and focal length (f) for curved mirrors.

Quick Revision Notes

- Law of reflection: angle of incidence = angle of reflection.
- Both measured from normal.
- Concave mirror: real or virtual images.
- Used in torches, telescopes.
- Convex mirror: always virtual, diminished, upright.
- Used in vehicle side mirrors.
- Mirror formula: $\frac{1}{v} + \frac{1}{u} = \frac{1}{f}$.
- u =object distance, v =image distance, f =focal length.

Practice Questions

- 1 Draw a ray diagram for a concave mirror.
- 2 Draw a ray diagram for a convex mirror.
- 3 Discuss why side mirrors use convex mirrors.
- 4 Calculate image distance using the mirror formula.
- 5 Discuss the difference between real and virtual images.
- 6 Explain reflection with mirrors in your own words.