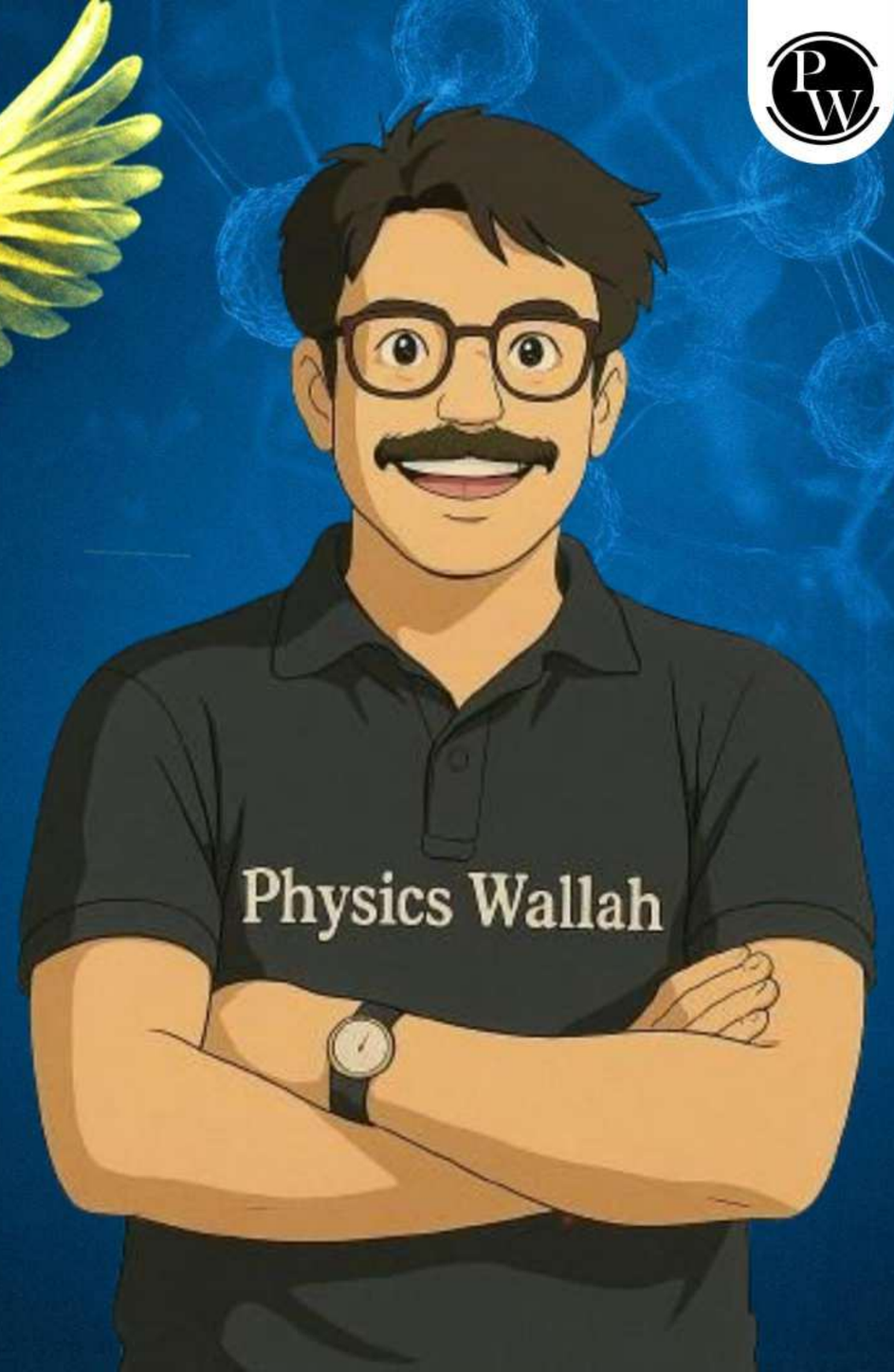
UDAAN

2026

LIGHT - Reflection & Refraction (Basics of Light)

PHYSICS | LECTURE-1



BY– Er. Rakshak Sir

Topics *to be covered*

A Basics of Light

B The Properties of Light

C Reflection of Light : Laws

SHAPATH GREHEN SAMAROH

Mai _____Shapath leta/leti hoon ki mai is saal Class 10th Board me ____% Score karunga/karungi.

Iske liye Jo Teachers advice karenge vo 100% FOLLOW karunga/karungi.

Science

CLASS 10th Theory - 80 Marks

- Physics – 25 Marks
- Chemistry – 25 Marks
- Biology – 30 Marks

Internals – 20 Marks

10th Physics v/s 9th Physics

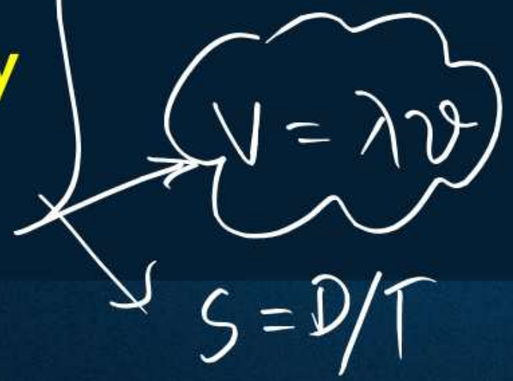
CLASS 9th

(Numerical)

- Motion
- Force & LOM
- Gravitation
- Work & Energy
- Sound

CLASS 10th

- Light – Reflection and Refraction (T+N)
- Human Eye & the Colourful World (T)
- Electricity (T+N)
- Magnetic Effects of Current (T)

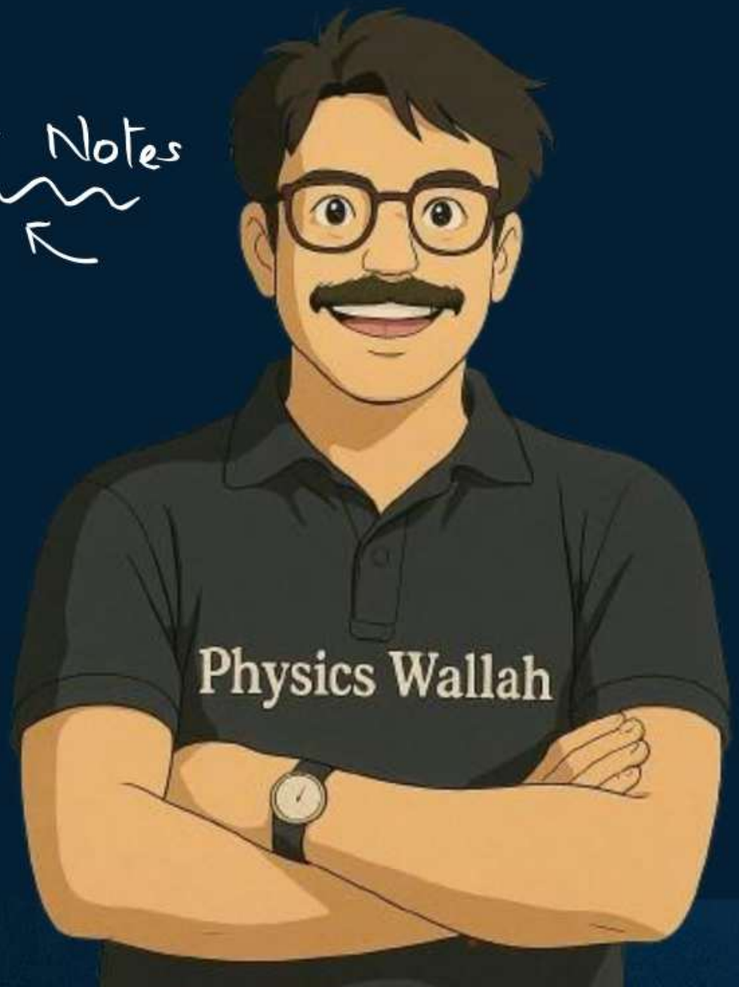


Resources to Follow

Er. Rakshak Sir

Class Notes

pdf



Reference

Book to follow

WALLAH

Topper Wali Taiyaari
Shuruat Se Karne Ki Baari

- Rakshak Dua
- Samridhi Sharma
- Sunil Vijay Hingarani

Latest 2025 Solved PYQ

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Questions related to Mysterious Light

Q1. What is Light ?

Ans. It is a form of Energy which gives sensation of Vision

Q2. Light behaves as particle or wave ?

→ 'Photon'

Ans. It shows Dual behavior; we will study only Particle Nature.

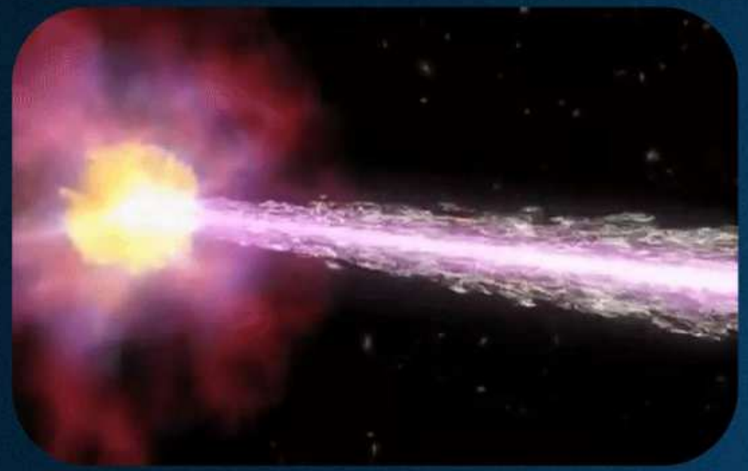
Q3. What is Light In Wave Nature?

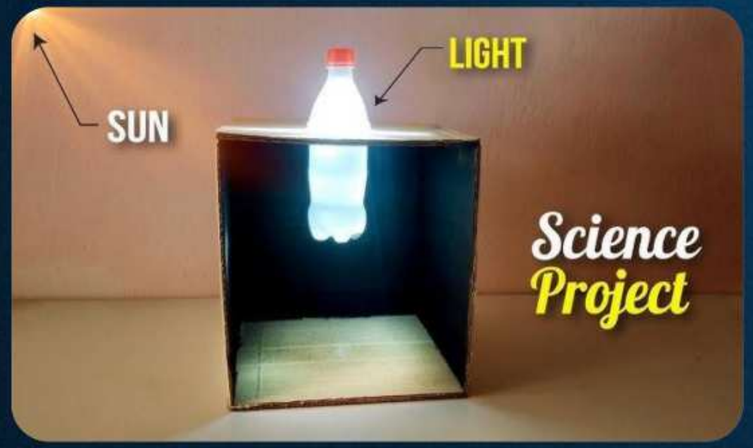
Ans. It is a Non-Mechanical Transverse Wave, that is why it travels in Vacuum

↓

Medium se Farak Nahi Padta

Properties of Light

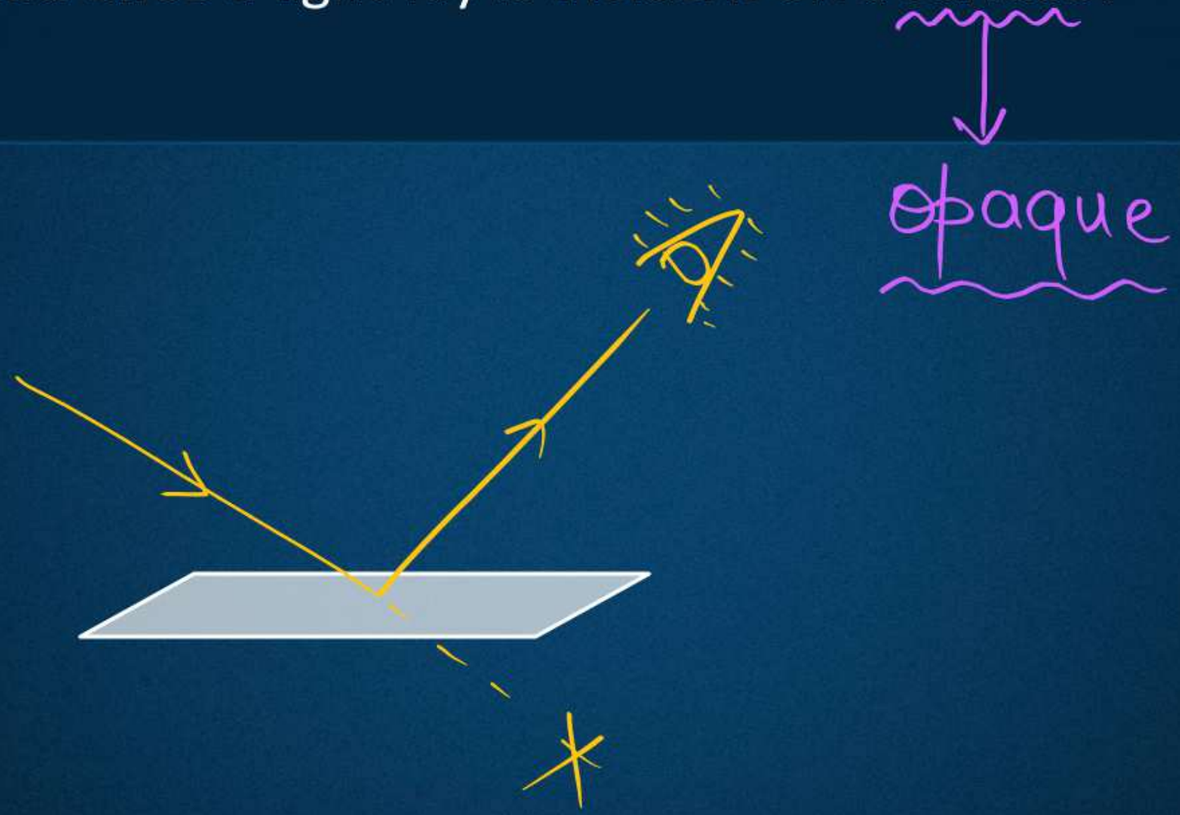




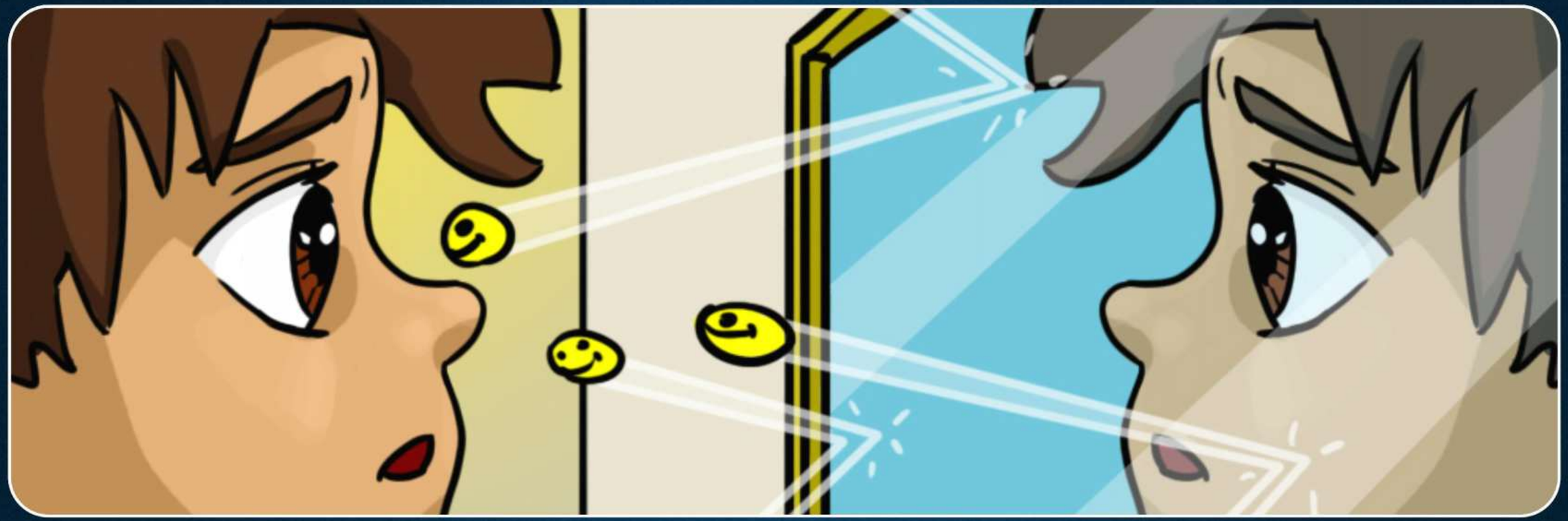
- Light has the property of a particle. These particles of light are called "Photons". Bright light has many particles while dark light has fewer particles.
- Light travels at a speed of about 30 Crore meters per second ($c = 3 \times 10^8$ m/s).
- When in a vacuum such as outer space where no matter is present, light travels straightforward, this is called "Rectilinear Propagation" of Light
- Several Photons in a single line constitute a Light Ray
- Several Light Rays constitute a Beam of Light

QUESTION

#Q. What happened once a light ray is incident on a surface?

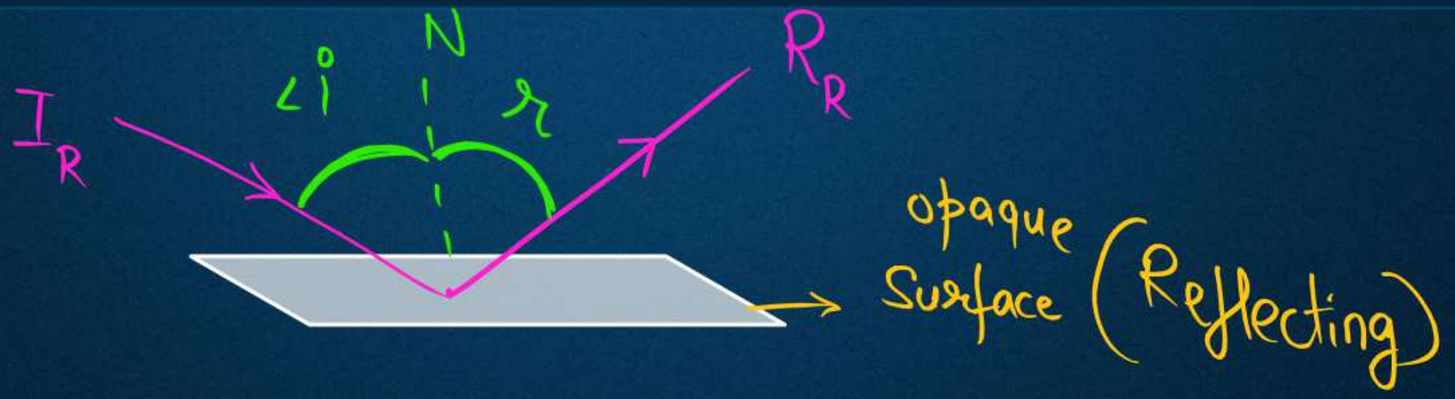


Bouncing Back of Light : Reflection



Phenomenon of Light : Reflection

- When a ray of light falls on a smooth polished surface and the light ray bounces back into the same medium, it is called the **reflection of light**.
- The **incident light ray** which lands upon the surface is said to be reflected away by the surface. The ray that bounces back is called the **reflected ray**.
- The perpendicular which is drawn on the surface is called **Normal**.



Types of Reflection

Specular and Diffuse Reflection

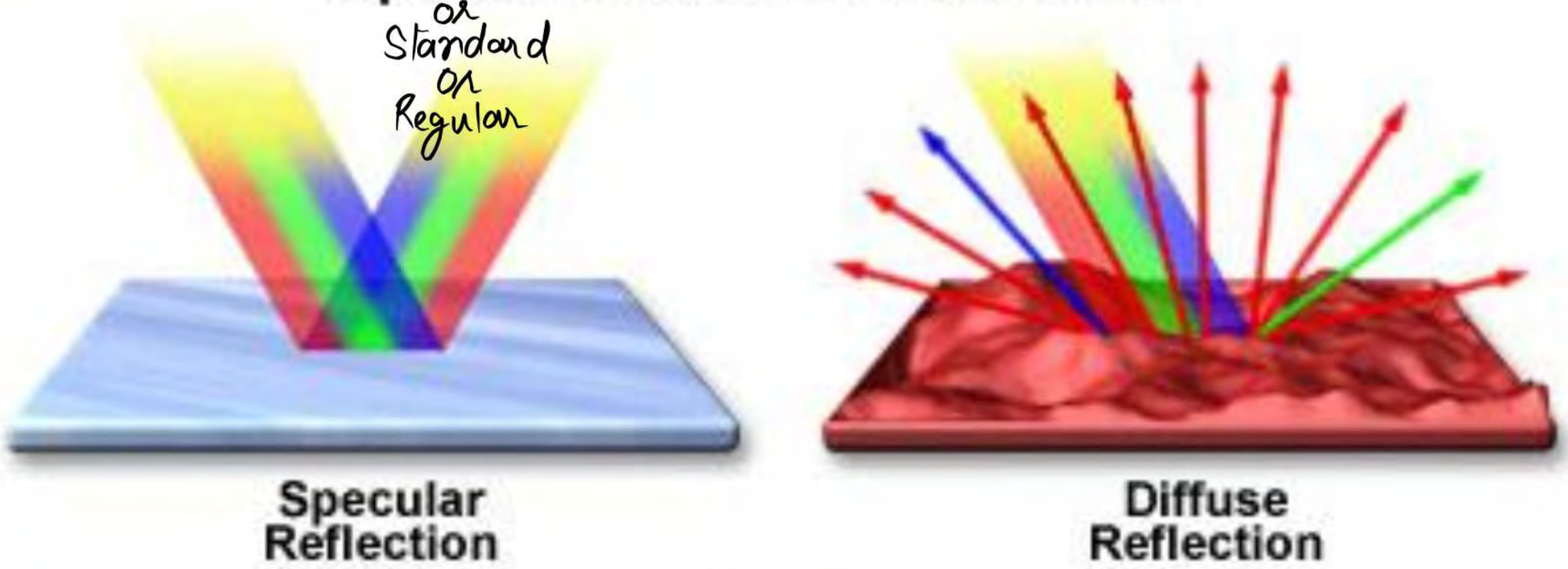


Figure 1

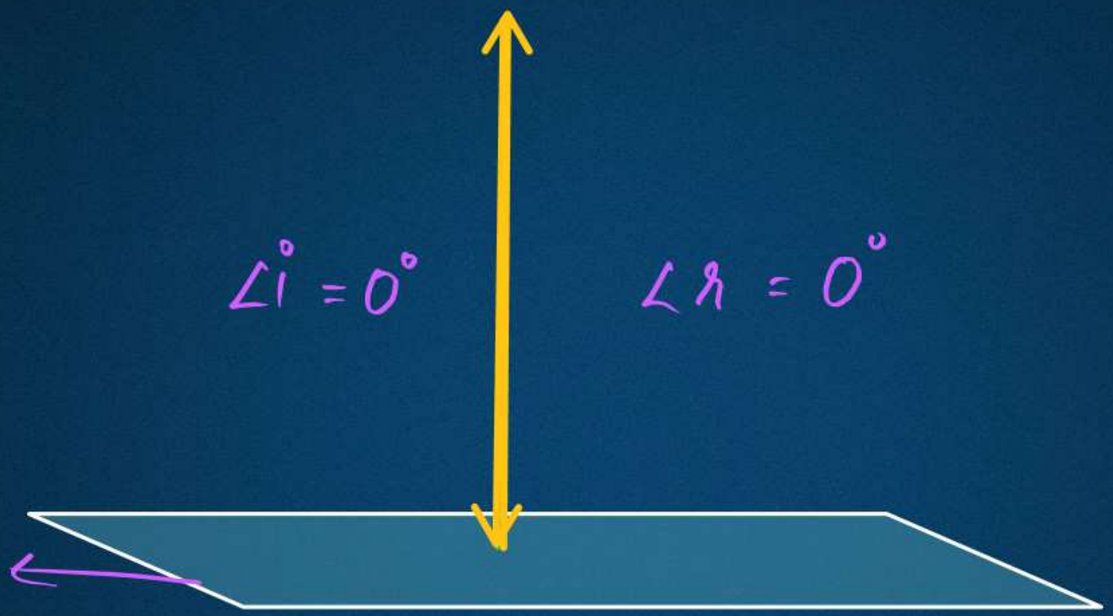
LAWS OF REFLECTION

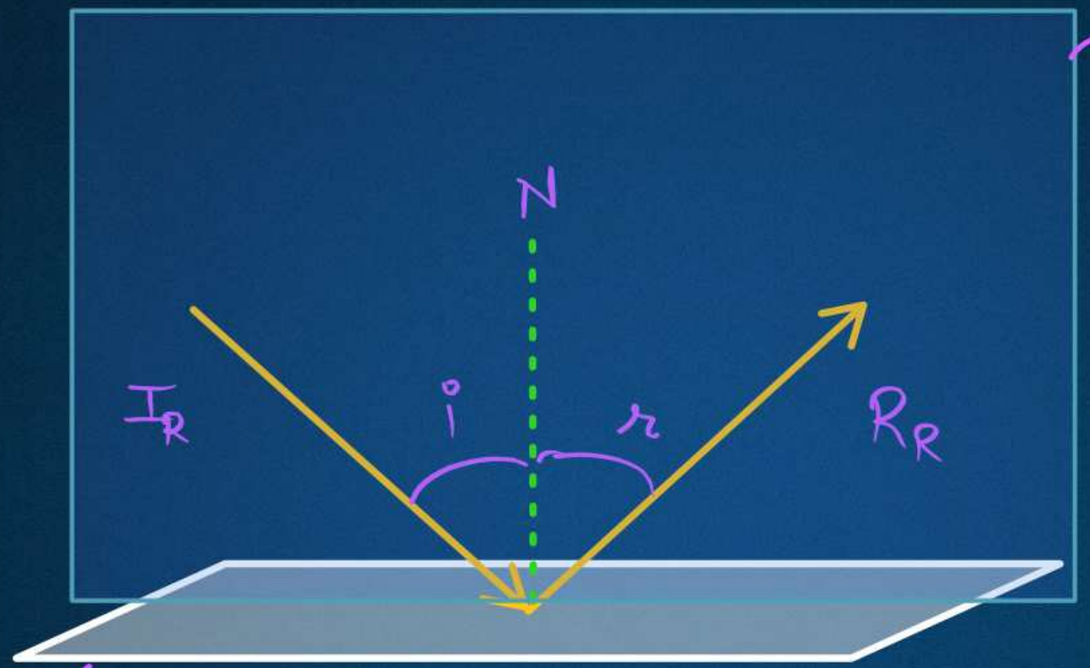
The laws of reflection determine the reflection of incident light rays on reflecting surfaces, like mirrors, smooth metal surfaces, and clear water.

The laws of reflection states that

- The Incident Ray, the Reflected Ray and the Normal all lie in the same plane
- The Angle of Incidence ($\angle i$) = The Angle of Reflection ($\angle r$)

* Normal Incidence (Spl. Case)



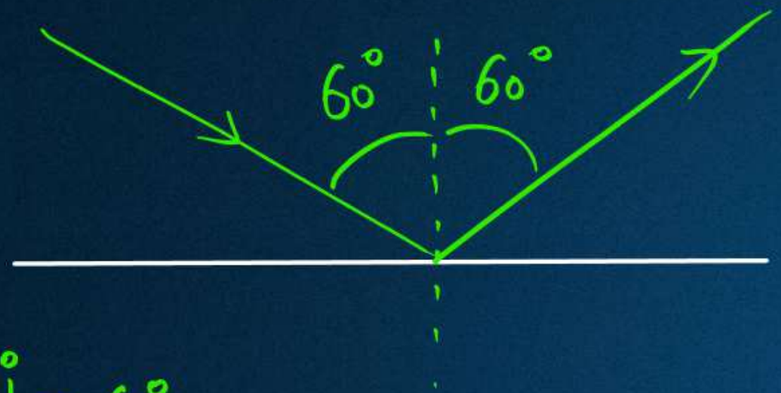


→ Imaginary plane ②

① Reflecting plane (Mirror)

Thodi si Question Practice

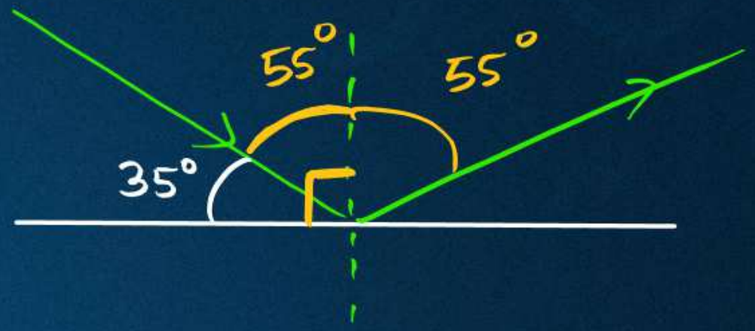
Q1



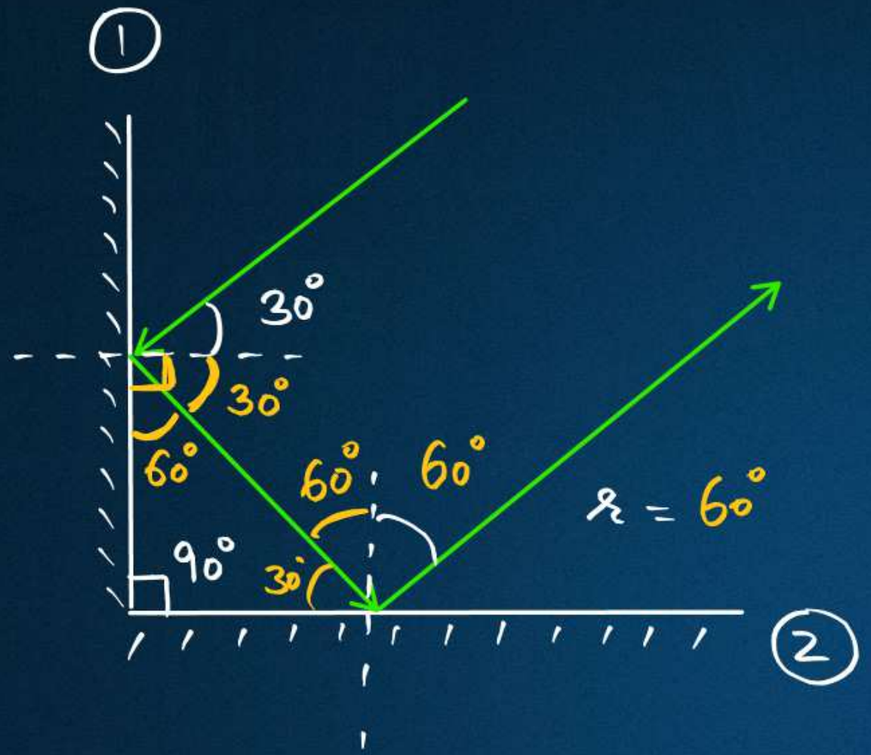
$\angle i = 60^\circ$

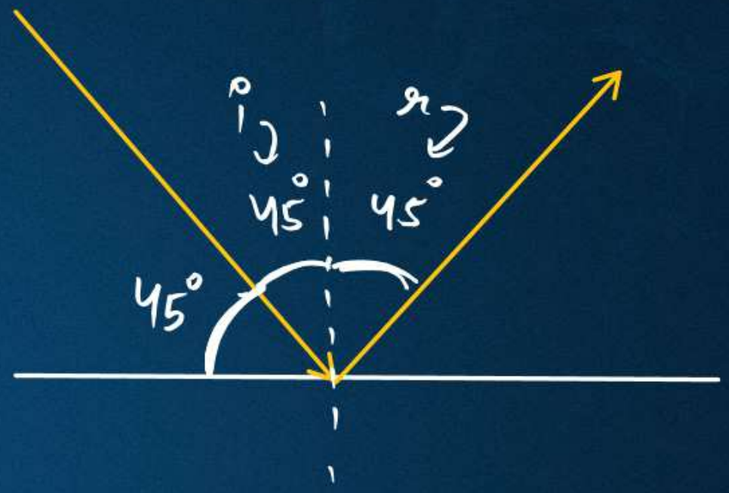
$\angle r = 60^\circ$

Q2



$\angle r = ?$





$i + r = 45 + 45 = 90°$

Thank You