RADIANT 2026

Physics

Light

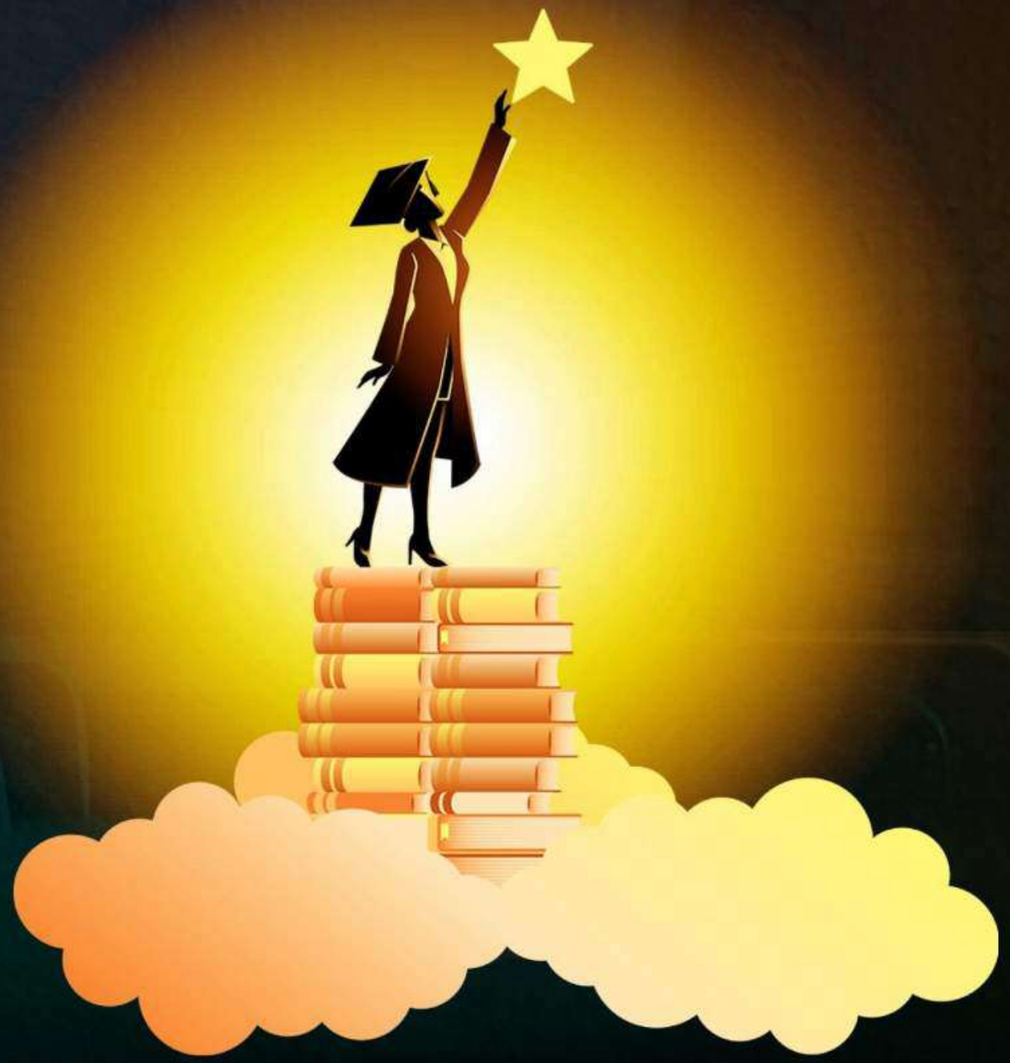
Lecture – 01

By – Akash Shravan Sir

Topics *to be covered*

1. Light
2. Reflection of Light
3. Some Definition Related to Reflection
4. QUESTIONS

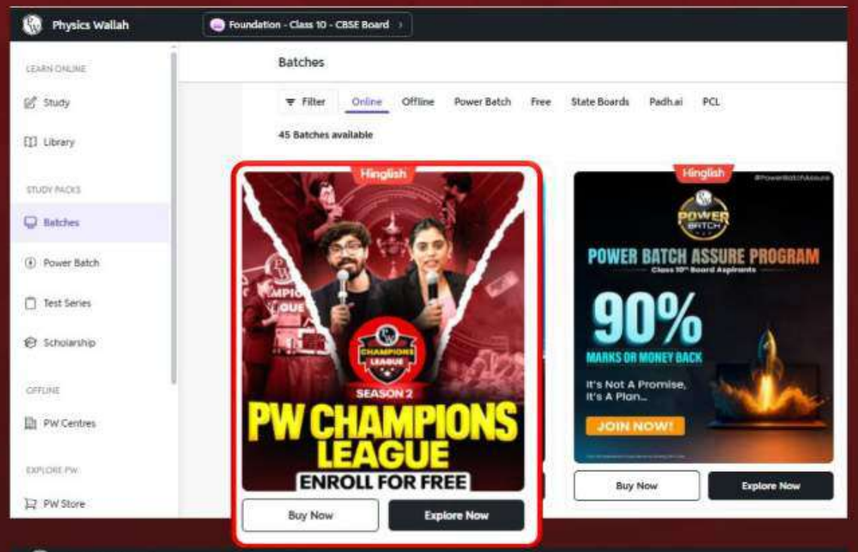
5) Introduction of Reflection



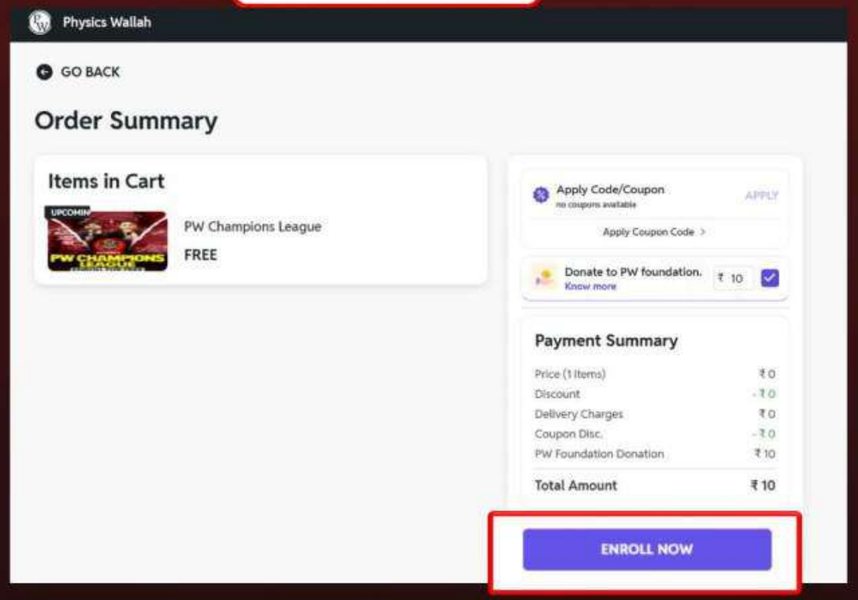

PW
CHAMPIONS
LEAGUE
PW CHAMPIONS LEAGUE
SEASON - 02

How to enroll?

CHAMPIONS LEAGUE
SEASON-02



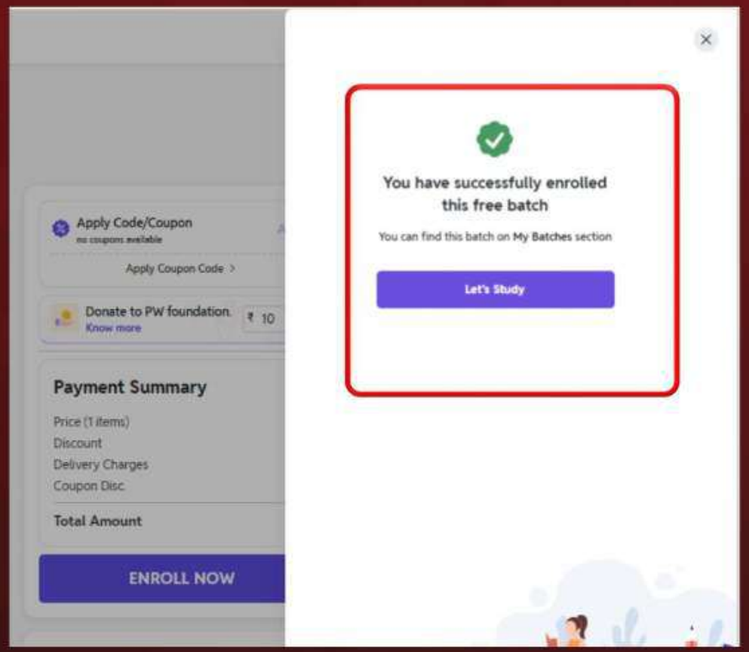
STEP 1: Under the Batches section, lookout for **PW Champions League** batch and click on **Buy Now**



STEP 2: Click on **Enroll Now** button!

How to enroll?

PW CHAMPIONS LEAGUE SEASON-02



STEP 3: Congrats Champs, you've successfully enrolled into PW Champions League!

Scan the QR code to enroll in the batch for FREE

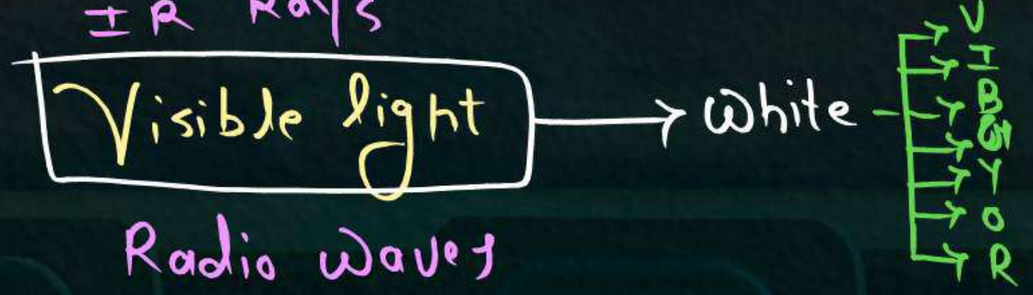

AKASH SIR
JOIN MY OFFICAL
TELEGRAM CHANNEL
@AKASHKETAARE
JOIN NOW
hysics Wallah

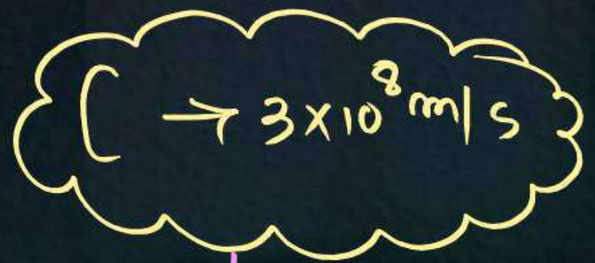
Sun :- γ Rays

X Rays

UV - Rays

IR Rays



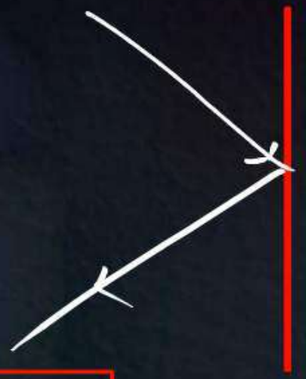

3×10^8 m/s
air
or
Vacuume

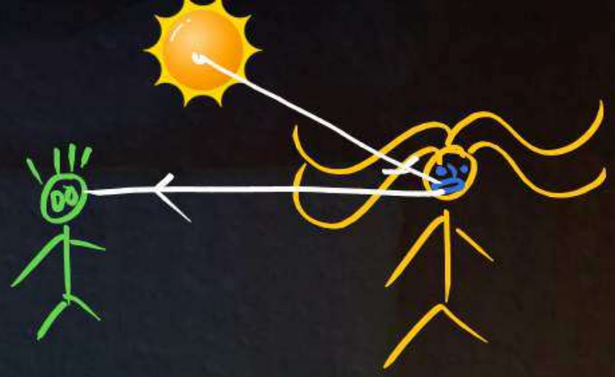
Light

FMW

- Light is a form of electromagnetic radiation that is visible to the human eye.
- It consists of particles called photons, which travel in waves. Light behaves both as a wave and as a particle, a phenomenon known as wave-particle duality.
- Light can vary in intensity, color, and wavelength.
- The visible spectrum of light includes the colors violet, blue, green, yellow, orange, and red, which are arranged according to their wavelength.
- Violet has the shortest wavelength, while red has the longest.

Reflection of Light





- When a beam of light strikes a surface, a part of it returns into the same medium. The part of light which is returned into the same medium is called the reflected light. Thus
- **The return of light into the same medium after striking a surface is called reflection.**

Reflection of Light

Kinds of Reflection:

There are the following two kinds of reflection:

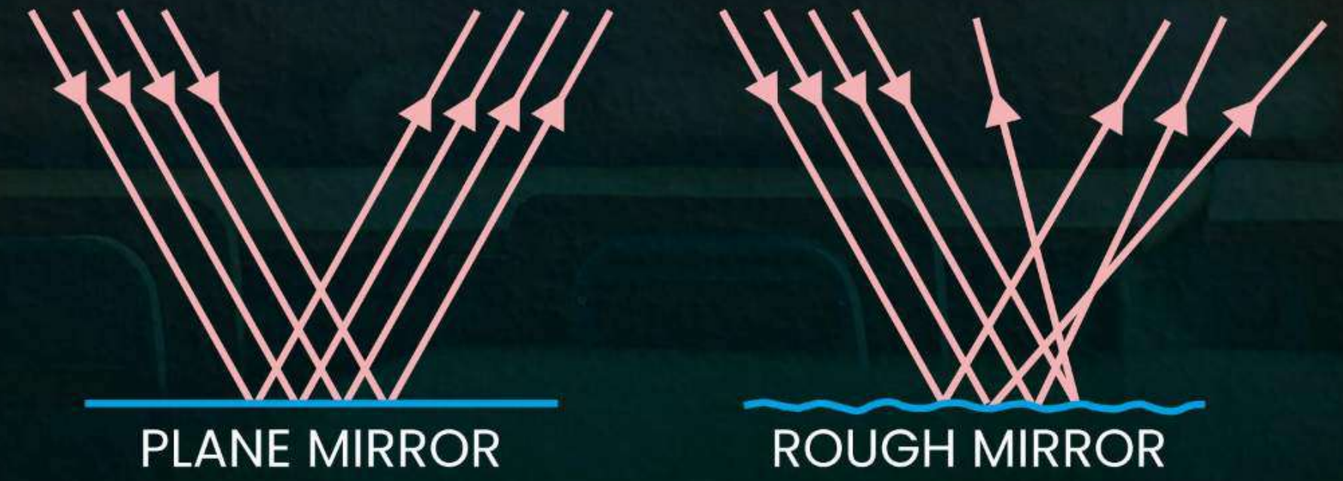
(i) Regular reflection, and

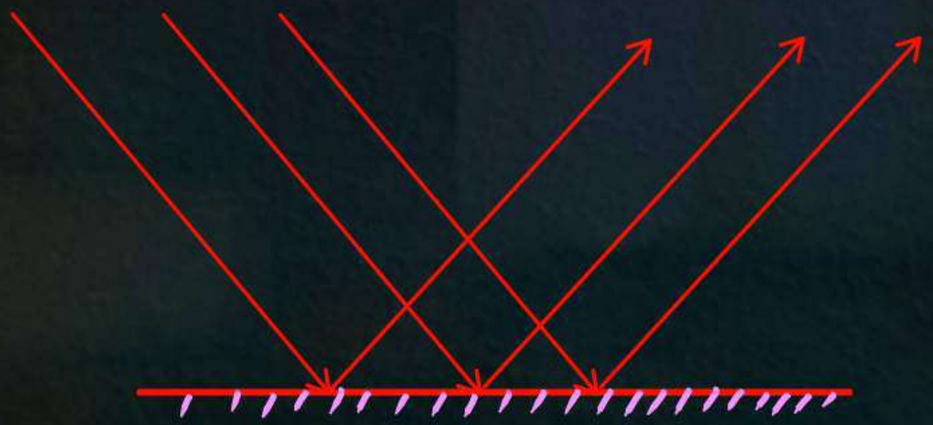
(ii) Irregular reflection.

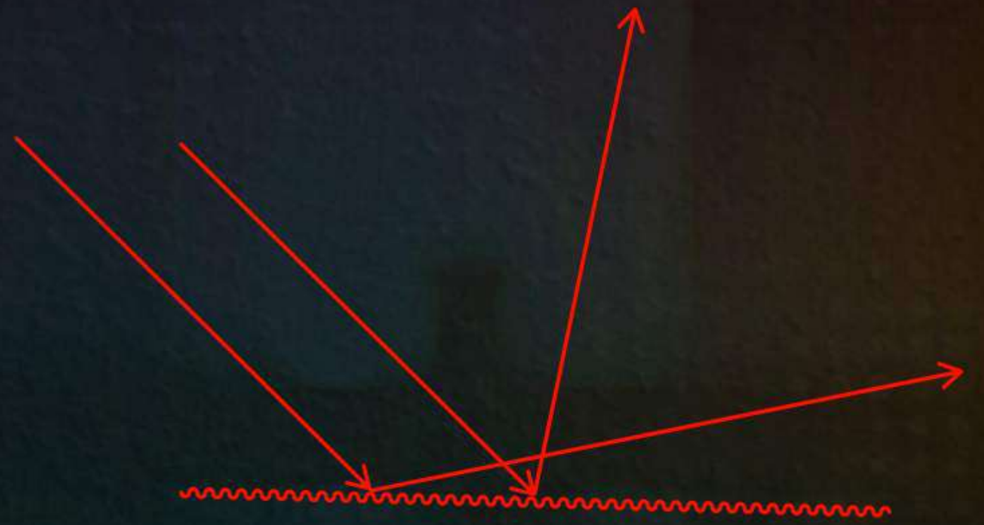
Reflection of Light

(i) Regular Reflection:

Regular reflection occurs when a beam of light falls on a smooth and polished surface, such as a plane mirror.







Reflection of Light

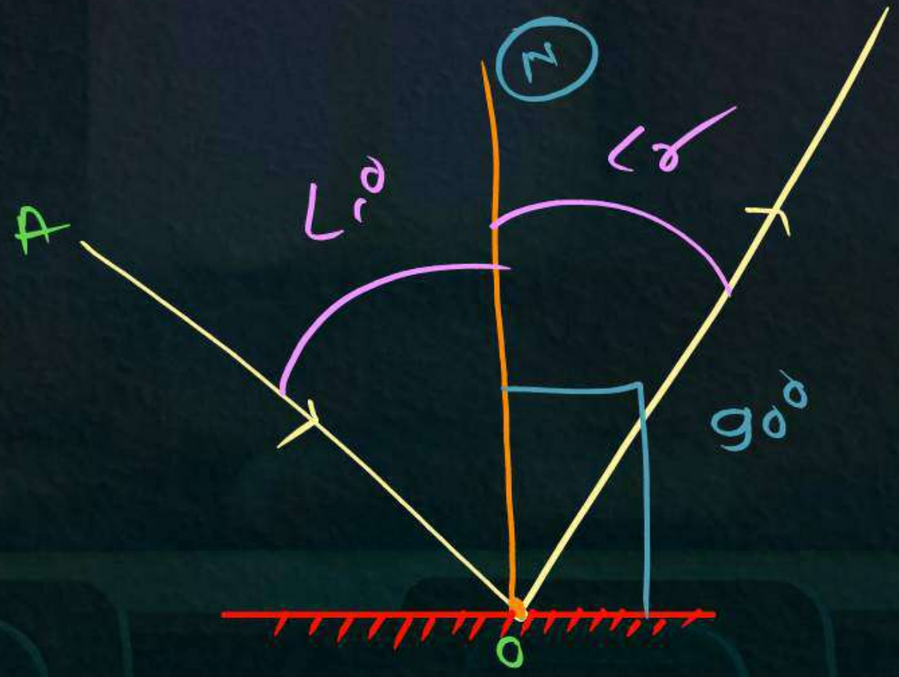
(ii) Irregular Reflection:

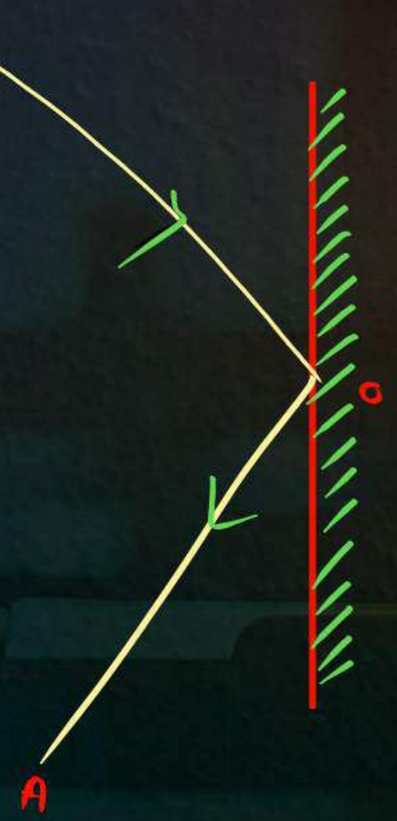
It is the diffused light obtained by reflection from various uneven surfaces which enables us to see the objects around us.

Some Terms Related With Reflection

AO → IR

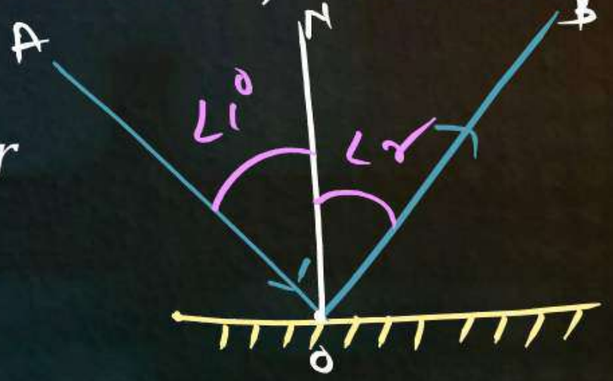
OB → RR





Laws of Reflection

A light ray obeys the following two laws for reflection from a surface, which are called the laws of reflection.



(1) The angle of incidence i is equal to the angle of reflection r (i.e., $\angle i = \angle r$).

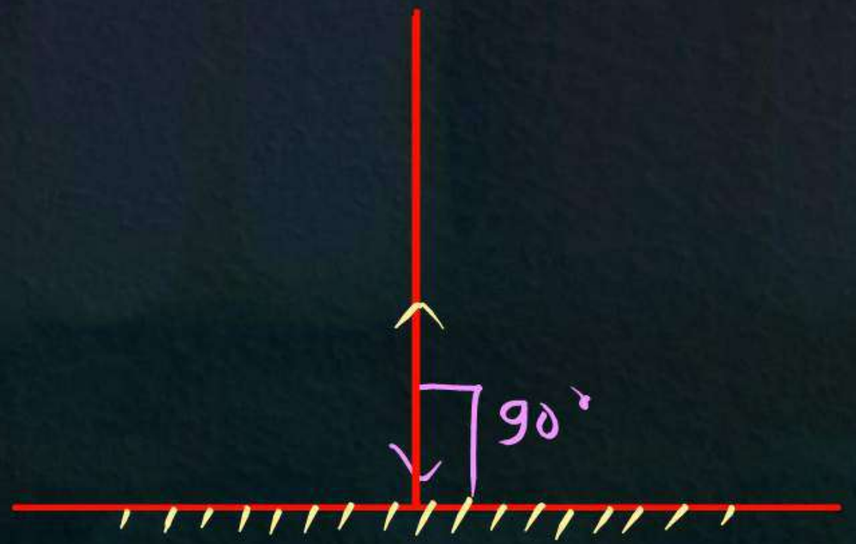
$\angle AON = \angle BON$

(2) The incident ray, the reflected ray and the normal at the point of incidence, lie in the same plane.

Reflection of a ray of light normally incident on a plane mirror

$\angle i = 0^\circ$

$\angle i = 0$



Question

According to the law of reflection:

A i/r = constant

B $\sin i/\sin r$ = constant

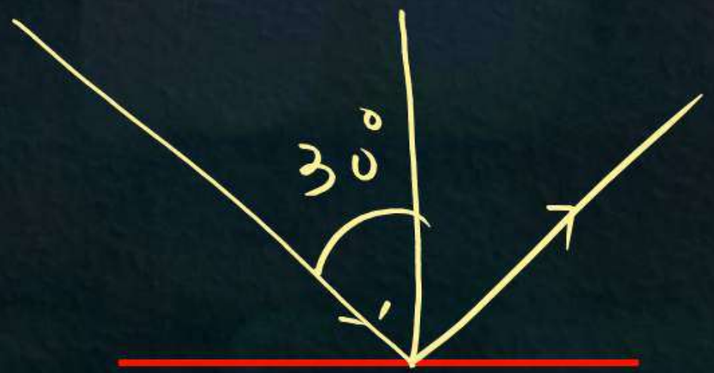
C $i + r$ = constant

D $i = r$

Ans. **(D)** $i = r$

Question

A light ray strikes a plane mirror at an angle of 30° to the normal. What is the angle of reflection?



$\angle i = 30°$

$\angle r = 30°$

$\angle i = \angle r$

$30 = \angle r$

Question

A light ray strikes a plane mirror at an angle of 30° to the normal. What is the angle of reflection?

Solution

According to the first law of reflection:
Angle of incidence (θ_1) = Angle of reflection (θ_2)

Given, angle of incidence $\theta_1 = 30°$

Therefore, angle of reflection $\theta_2 = 30°$

Answer: 30°

Question

What is reflection?

A. The bending of light when it passes through different mediums

B. The scattering of light in different directions

C. The return of light after hitting a smooth surface

D. The splitting of light into its constituent colors

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A. The bending of light when it passes through different mediums

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C. The return of light after hitting a smooth surface

D. The splitting of light into its constituent colors

Ans. **(C)** The return of light after hitting a smooth surface

Question

According to the law of reflection, the angle of incidence is always equal to the:

A. Angle of ~~refraction~~

B. Angle of dispersion

C. Angle of reflection

D. Critical angle

Question

According to the law of reflection, the angle of incidence is always equal to the:

A Angle of refraction

B Angle of dispersion

C Angle of reflection

D Critical angle

Ans. **(C)** Angle of reflection


Thank You