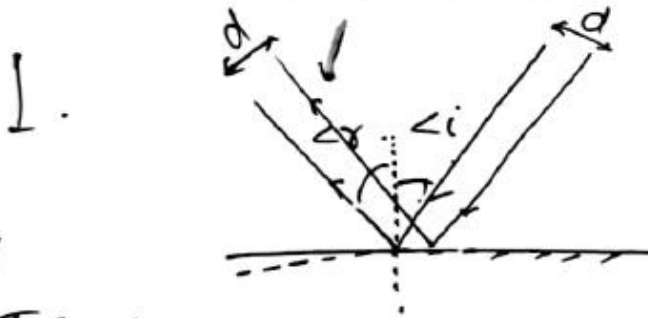


→ TYPE OF REFLECTION →

→ 1 - REGULAR REFLECTION

2 - IRREGULAR - " → If gap is not same



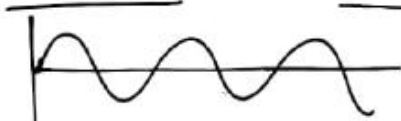
2



#

If Gap between two rays is same  
in the reflection before and after

# → TYPE OF REFLECTION →



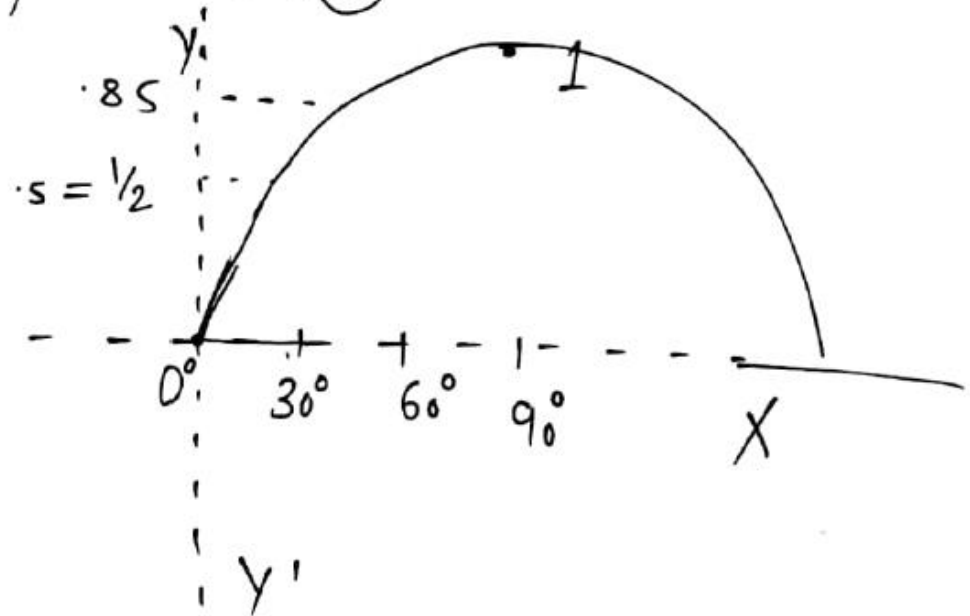
$x$	$0^\circ$
$y$	

$$\frac{1.732}{2} = .85$$

$$\frac{.5}{x'}$$

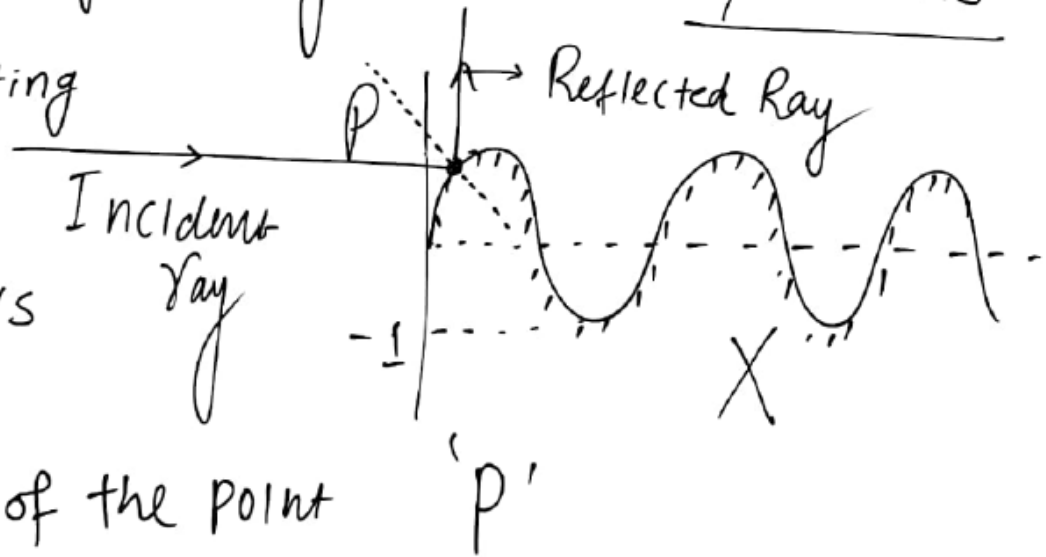
35

$$y = \sin(x)$$

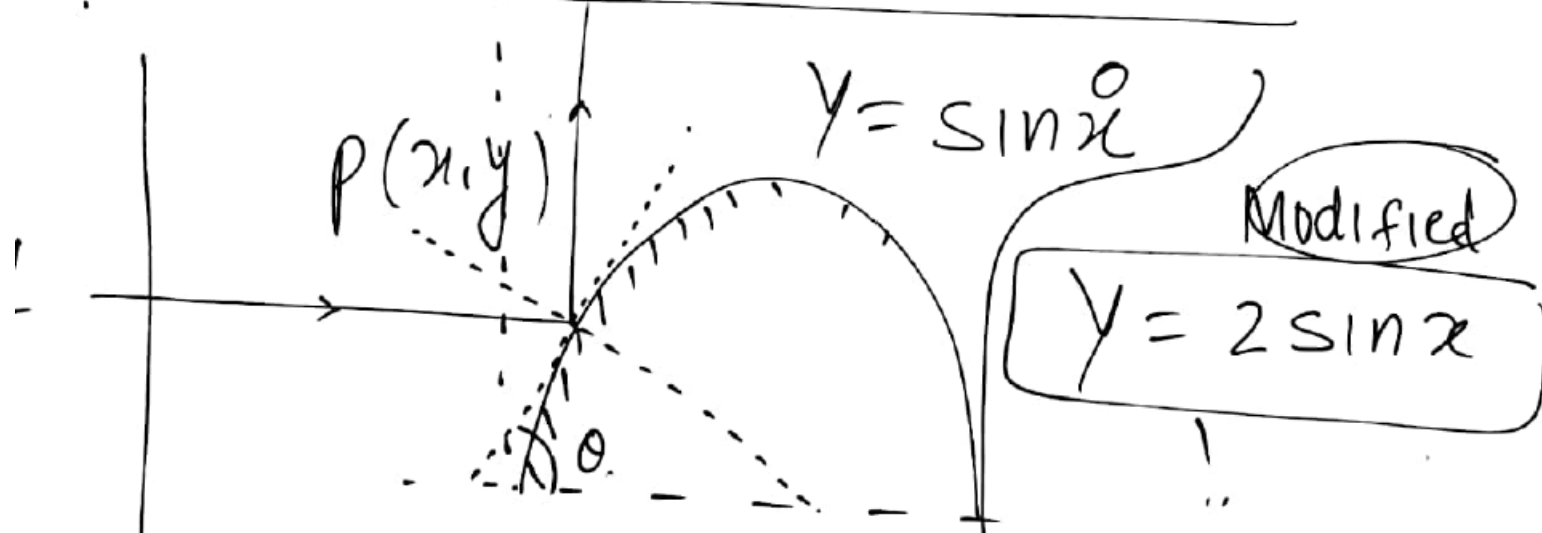


→ TYPE OF REFLECTION →

a. A mirror given by equation  $y = \sin x$   
 Now a Ray incidenting  
 // to axis and it  
 becomes // y axis  
 after reflection  
 Find Co-ordinate of the point 'p'



# TYPE OF REFLECTION →



$$\tan \theta = \frac{dy}{dx} = 1$$

$$\theta = 45$$

$$= \frac{d(\sin x)}{dx} = 1 \quad \left| \quad x = (0, 0) \right.$$

$$\cos x = 1$$

→ TYPE OF REFLECTION →

$$\frac{dy}{dx} = 1 \quad \frac{d}{dx} (2 \sin x) = 1$$

$$y = 2 \sin x \quad \leftarrow \quad = 2 \cos x = 1$$

$$\cos x = \frac{1}{2} = \cos 60^\circ$$

$$y = 2 \cdot \sin \frac{\pi}{3} =$$

$$y = \frac{2 \cdot \sqrt{3}}{2} =$$

$$x = \left( \frac{\pi}{3}, \sqrt{3} \right)$$

$$= \frac{3 \cdot 14}{3}$$

→ TYPE OF REFLECTION →

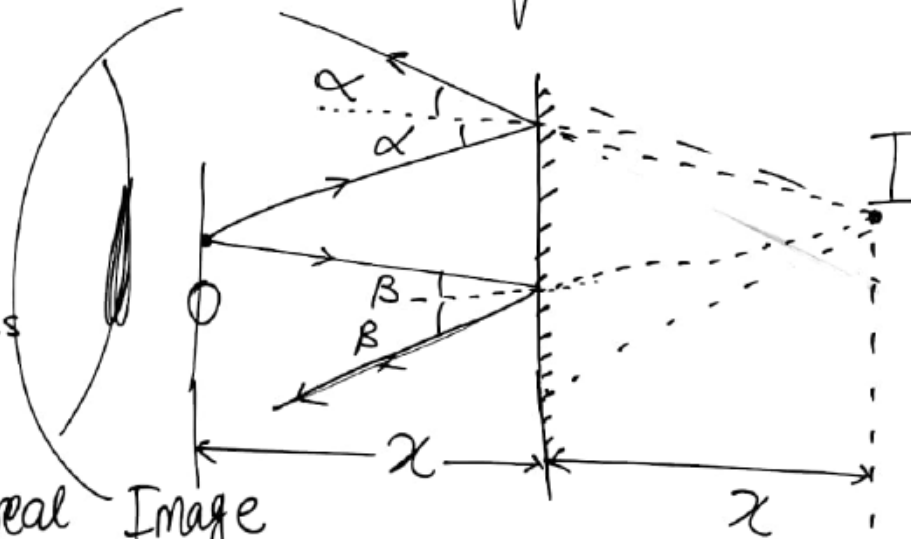
→ REFLECTION BY PLANE MIRROR →

→ Image formation

Characteristics of Image

1. Real object makes Virtual Image and

Virtual object makes real Image



2. Distance between mirror and 'O' = distance between mirror and 'I'

→ TYPE OF REFLECTION →

REFLECTION BY PLANE MIRROR →

3. Intensity of  $O$  = Intensity of Image

④ Right ⇌ Left  
Conversion



I

⑤ Same Size, Upright.

→ TYPE OF REFLECTION →

12:00:00

Q. Clock / Watch →  
If Real time

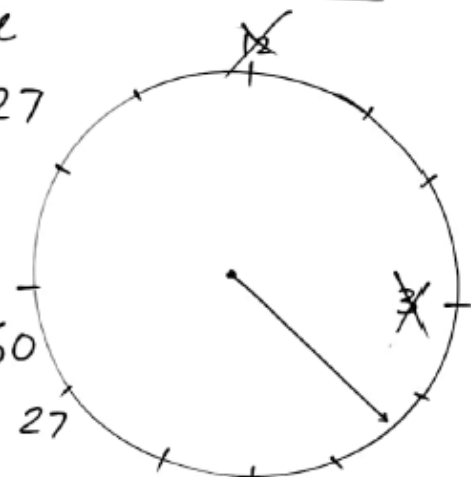
04:26:27

Image time

= 11:59:60

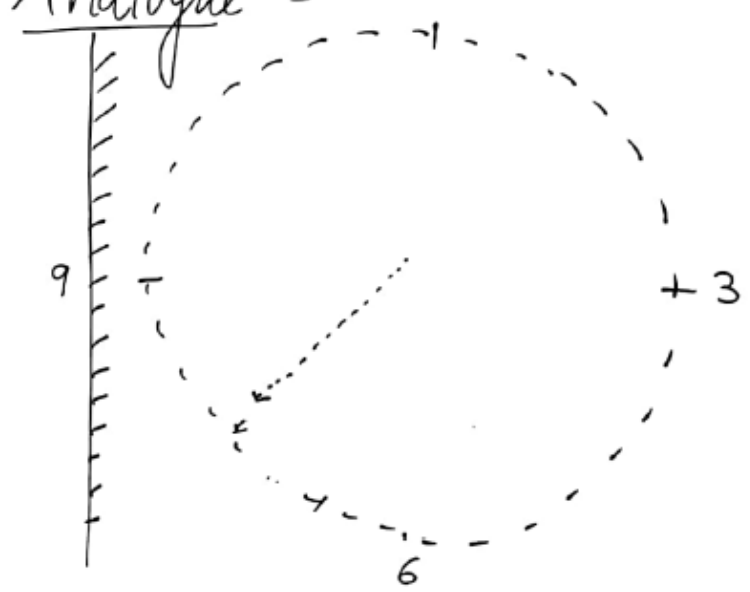
Real - 04:26:27

Image → 07:33:33 Ans



① Digital → Numbers <sup>12,3,</sup> 0-9

② Analogue → 3:26:27





→ MOTION → Q. 1 Mirror lying in y-z plane

$$V_0 = \underline{2\hat{i}} + 3\hat{j} + 4\hat{k}$$

then  $V_I = -2\hat{i} + 3\hat{j} + 4\hat{k}$

I → When only  
Object moves  
(Mirror kept fix)

(a) Normal to mirror

$$V_I = -V_0$$

(b) In the plane of mirror

$$V_I = V_0$$



→ MOTION →

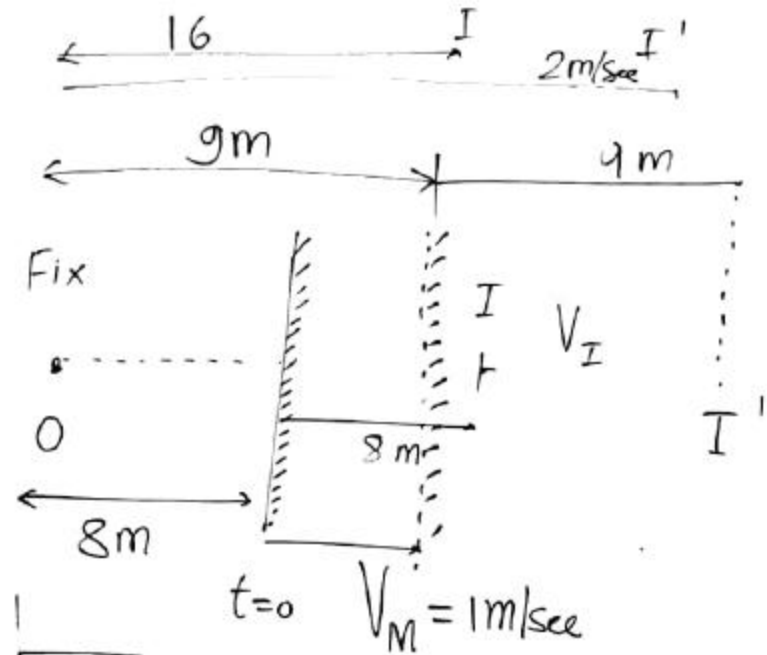
2 → When only mirror moves  
 (0 is fix)  $v = \frac{x_f - x_i}{1}$

$x_i = 16$   
 $x_f = 18$

(a) Normal direction  $v_m = 2$

$$v_I = +2v_m$$

(b) Along the plane of mirror



Q. Mirror is in y-z plane

$$v_m = 1\hat{i} + 88\hat{j} + 99\hat{k}$$

$$v_I = 2\hat{i} + 0\hat{j} + 0\hat{k}$$

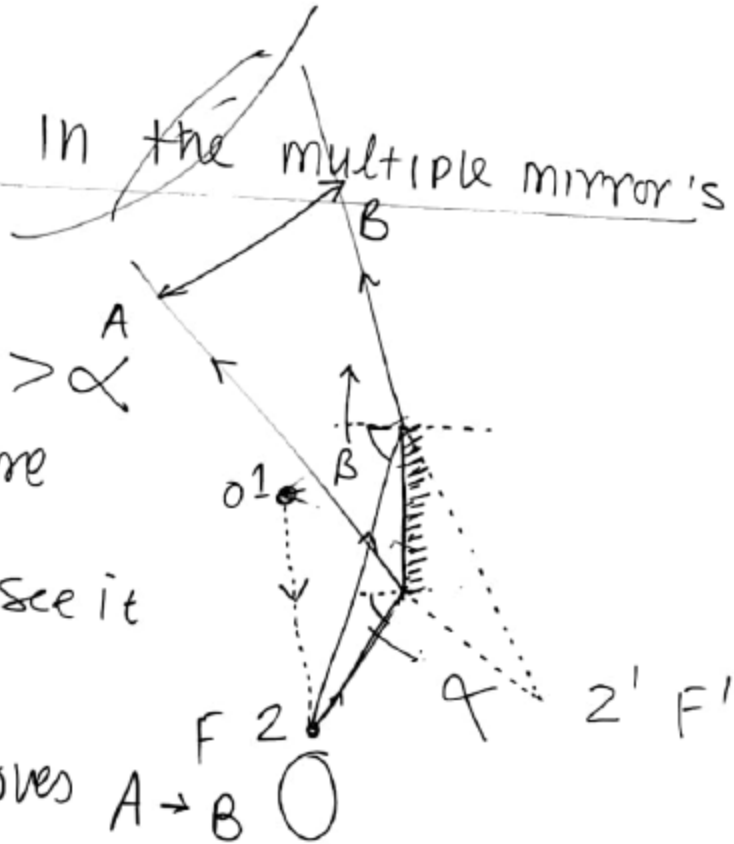
→ MOTION →

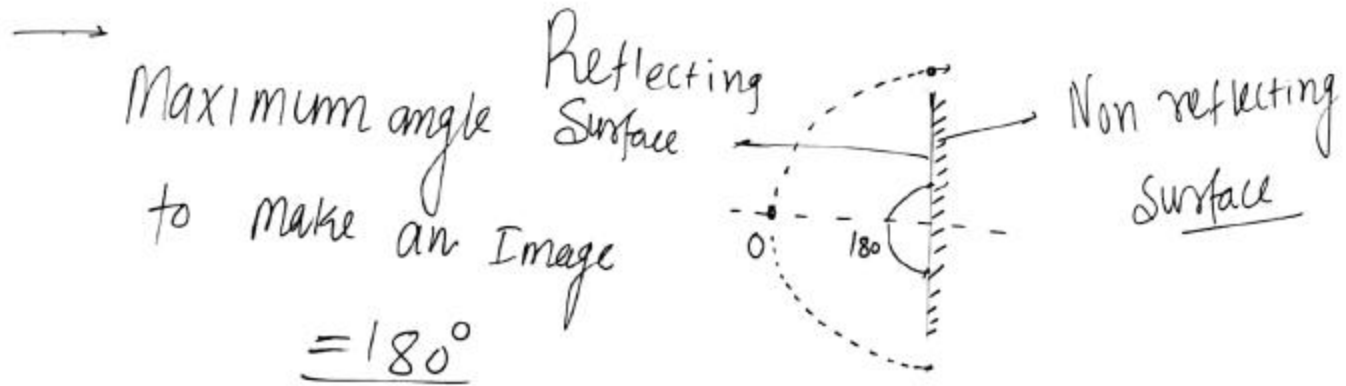
→ Image formation in the multiple mirror's

Concept →

Image will be there  
but object can not see it  
at position '2'

But If a man moves  $A \rightarrow B$   
then Image can be seen by this man.





# Two mirrors -

# Kept parallel then angle between mirror's =  $0^\circ$

