

## Number Theory

Shruti, +91 73502 84510, +91...

Mirudula added +91 96650 01338

9 April 2021

Today's lecture of classical mechanics will start at 12.30 p.m.

12:04 pm ✓✓

To join the meeting on Google Meet, click this link:

<https://meet.google.com/vfh-mekv-ivs>

Or open Meet and enter this code:  
vfh-mekv-ivs

12:27 pm ✓✓

~ Sakshu ❤️ left

10 April 2021

Lecture of classical mechanics will start at 11.30 A.M.

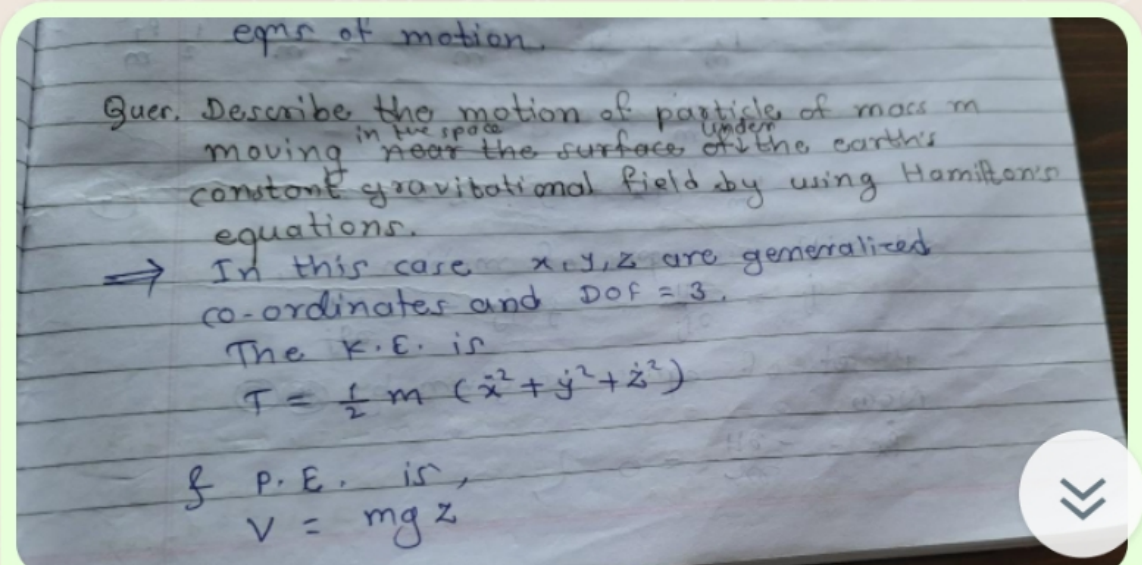
10:49 am ✓✓

To join the meeting on Google Meet, click this link:

<https://meet.google.com/zez-padm-ndg>

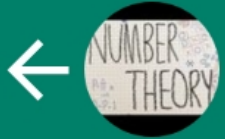
Or open Meet and enter this code:  
zez-padm-ndg

11:28 am ✓✓



Message





# Number Theory

Shruti, +91 73502 84510, +91...



10 April 2021

Lecture of classical mechanics will start at 11.30 A.M.

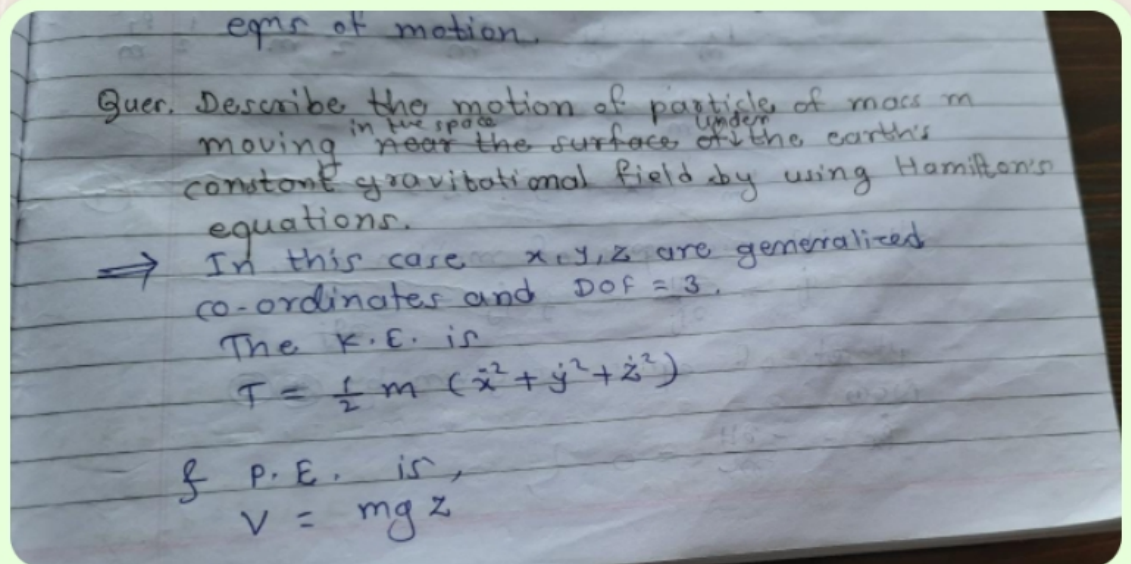
10:49 am ✓✓

To join the meeting on Google Meet, click this link:

<https://meet.google.com/zez-padm-ndg>

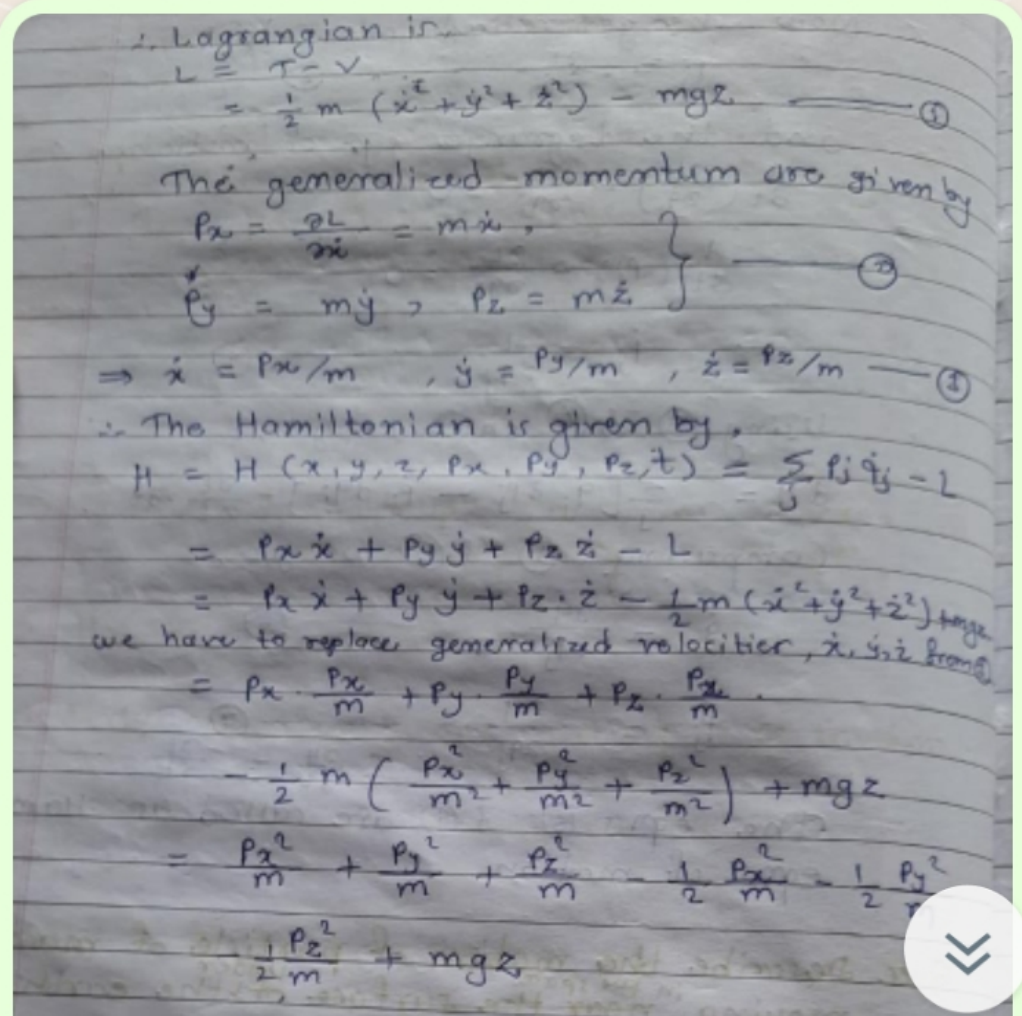
Or open Meet and enter this code:  
zez-padm-ndg

11:28 am ✓✓



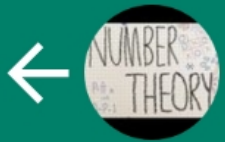
1

12:28 pm ✓✓



Message





## Number Theory

Shruti, +91 73502 84510, +91...



~ Pruthviraj added +91 90759 21044

15 April 2021

To join the meeting on Google Meet, click this link:

<https://meet.google.com/opb-yyjz-ijt>

Or open Meet and enter this code:  
opb-yyjz-ijt

11:34 am ✓✓

16 April 2021

Today's lecture is canceled due to internal exam of MSc 2

12:53 pm ✓✓

~ Aakanksha +91 91722 38148

Okk

12:54 pm

~ ~Sona💕 +91 70570 58859

Ok sir

12:54 pm

N

~ Nutan Patil +91 90494 15265

Ok sir

12:54 pm

17 April 2021

Lecture of classical mechanics will start at 11.45

11:29 am ✓✓

~ ~Sona💕 +91 70570 58859

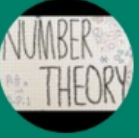
Ok sir

11:30 am



Message



←  **Number Theory**  
Shruti, +91 73502 84510, +91...



Lecture of classical mechanics will start  
at 11.45

17 April 2021

11:29 am ✓✓

 ~ ~Sona  +91 70570 58859

Ok sir

11:30 am

To join the meeting on Google Meet, click  
this link:

<https://meet.google.com/rkd-hics-rup>

Or open Meet and enter this code:  
rkd-hics-rup

11:46 am ✓✓

Due to network issue we will continue the  
example on monday

12:30 pm ✓✓

 ~ Aakanksha +91 91722 38148

K

12:30 pm

 ~ ~Sona  +91 70570 58859

Ok sir

12:31 pm

 **Shruti Msc 1**

**You**

Due to network issue we will continue the  
example on monday



12:31 pm

 ~  **Prathmesh.**  +91 96650 01338

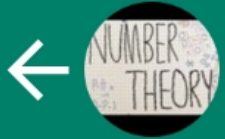
**You**

Due to network issue we will continue the  
example on monday



Message





20 April 2021

**Join our Cloud HD Video Meeting**Zoom is the leader in modern enterprise video comm...  
us04web.zoom.us<https://us04web.zoom.us/j/72928970031?pwd=dDlka3gzZ08yTEZkQ2V1VTJFdm81dz09>

2:35 pm ✓✓

Due to 45 min time limit we will continue the example tomorrow

3:17 pm ✓✓

Mrudula

oky sir 3:18 pm

~ Vidu Patil +91 94039 63907

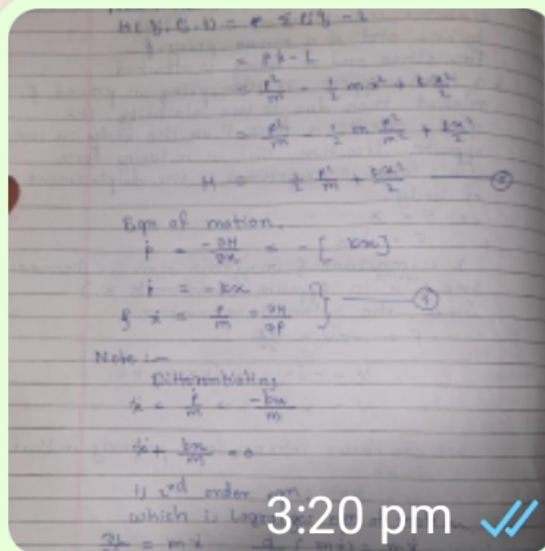
Ok 3:18 pm

~ ~Sona💕 +91 70570 58859

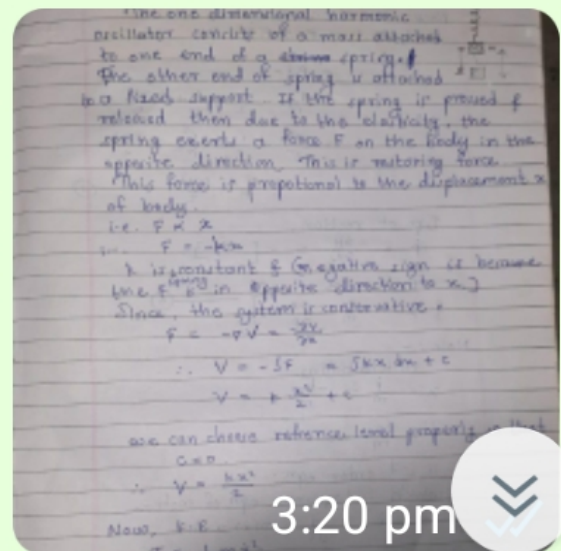
Ok sir 3:18 pm

~ 👑 Prathmesh. 👑 +91 96650 01338

Ok sir 3:18 pm

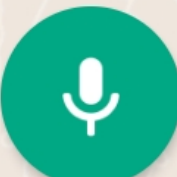


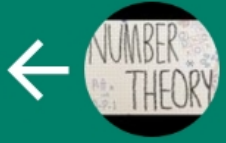
3:20 pm ✓✓



3:20 pm ✓✓

Message



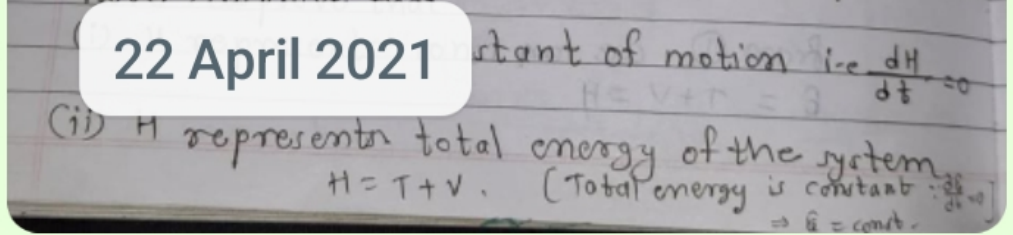


## Number Theory

Shruti, +91 73502 84510, +91...



22 April 2021



Homework

9:21 am ✓✓

You deleted this message 11:28 am

~ Pruthviraj +91 70579 00091

Ode ch lec chalu ahe 11:29 am

Ok we will start the lecture at 12.30

12:04 pm ✓✓

~ Pruthviraj +91 70579 00091

Ok sir 12:05 pm

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us04web.zoom.us<https://us04web.zoom.us>[/j/73708615555?pwd=](https://us04web.zoom.us/j/73708615555?pwd=bFB5dlp1Skg2WnZJb05uV2ZCQUcxQT09)[bFB5dlp1Skg2WnZJb05uV2ZCQUcxQT09](https://us04web.zoom.us/j/73708615555?pwd=bFB5dlp1Skg2WnZJb05uV2ZCQUcxQT09)

12:32 pm ✓✓

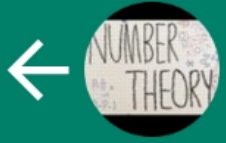
23 April 2021

Lecture will start at 12.45 12:32 pm ✓✓

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Message



**Number Theory**

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12:32 pm ✓✓

23 April 2021

Lecture will start at 12.45 12:32 pm ✓✓

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us04web.zoom.us<https://us04web.zoom.us/j/76793914172?pwd=MHJ5N2FKRW42Y0FOMDkvckVOak5aQT09>

12:46 pm ✓✓

~ ~Sona

+91 70570 58859

Sir aamcha aavaj tumchyapryant jat  
nahiye

1:16 pm

**Shruti Msc 1**

End Zal lecture 1:28 pm

~ Vedu +91 94212 05754

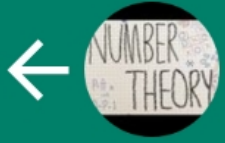
Hoy 1:28 pm

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us04web.zoom.us<https://us04web.zoom.us/j/74343400112?pwd=a2hLMkNpcGtVTXE5bStLV0pyZmxVQT09>

1:28 pm ✓✓

Message





# Number Theory

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OK Sir

1:45 pm

24 April 2021



**Classical Mechanics Internal**  
docs.google.com

<https://forms.gle/2XyaXnW1fMBLXexx8>

11:30 am ✓✓

**Shruti Msc 1**

Open hot nhiye 11:32 am

Sir 11:32 am

~ Vedu +91 94212 05754

Hoy 11:32 am

~ Aakanksha +91 91722 38148

Zal 11:32 am

~ Pruthviraj +91 70579 00091

**Shruti Msc 1**

Open hot nhiye

Hoy 11:33 am

Check kra 11:33 am ✓✓

~ Aakanksha +91 91722 38148

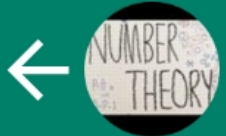
Open 11:33 am

Mrudula

Message







# Number Theory

Shruti, +91 73502 84510, +91...



Sir open hot nhiy 11:36 am

27 April 2021

## Join our Cloud HD Video Meeting

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<https://us04web.zoom.us/j/72994389819?pwd=dmM3ZnNXV2FpU1puYTVrZzZlFeTJFZz09>

2:30 pm ✓✓

$$\Delta q_j = q_{jc} - q_{jb} + \delta q_j \quad (\text{By } \textcircled{3})$$

$$= q_j(t + \Delta t) - q_j(t) + \delta q_j$$
 By mean value theorem,  

$$= \dot{q}_j \Delta t + \delta q_j \quad (\text{By mean value th})$$
 i.e.  $\Delta q_j = \delta q_j + \dot{q}_j \Delta t$   
 This is required relation between  $\delta$  &  $\Delta$  variation.

Ex. If the function  $f = f(q_j, \dot{q}_j, t)$  then show that  

$$\Delta f = \delta f + \Delta t \frac{df}{dt}$$

$\Rightarrow$  Solution :-  
 We have,  

$$\Delta f = \sum_j \left( \frac{\partial f}{\partial q_j} \Delta q_j + \frac{\partial f}{\partial \dot{q}_j} \Delta \dot{q}_j \right) + \frac{\partial f}{\partial t} \Delta t$$
 We have,  

$$\Delta q_j = \delta q_j + \dot{q}_j \Delta t$$

$$\therefore \Delta \dot{q}_j = \delta \dot{q}_j + \ddot{q}_j \Delta t$$

$$\therefore \Delta f = \sum_j \frac{\partial f}{\partial q_j} (\delta q_j + \dot{q}_j \Delta t) + \sum_j \frac{\partial f}{\partial \dot{q}_j} (\delta \dot{q}_j + \ddot{q}_j \Delta t) + \frac{\partial f}{\partial t} \Delta t$$

$$= \sum_j \left[ \frac{\partial f}{\partial q_j} \delta q_j + \frac{\partial f}{\partial \dot{q}_j} \delta \dot{q}_j \right] + \Delta t \left[ \sum_j \left( \frac{\partial f}{\partial q_j} \dot{q}_j + \frac{\partial f}{\partial \dot{q}_j} \ddot{q}_j \right) + \frac{\partial f}{\partial t} \right]$$

$$= \delta f + \Delta t \cdot \frac{df}{dt} \quad (\because \delta t = 0)$$

Thus,  

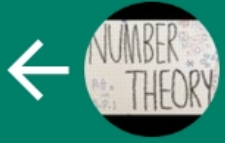
$$\Delta = \delta + \Delta t \frac{d}{dt}$$

3:07 pm ✓✓

Ex. A system of 2 dof. is described by the Hamiltonian  $H = aq_1^2 - aq_1^2 + b\dot{q}_1^2$ ,  
 $a, b$  are constants.

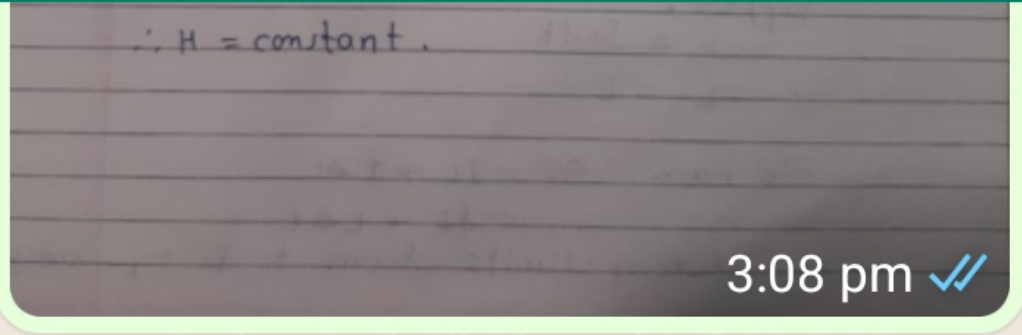
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# Number Theory

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28 April 2021

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<https://us04web.zoom.us/j/72682850381?pwd=T21JSVZRNFVUT1BGWTV5WmxtU2Jrdz09>  
1:04 pm

29 April 2021

Lecture will start at 11.30  
11:12 am

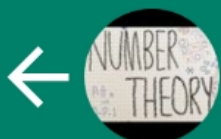
**Join our Cloud HD Video Meeting**  
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us04web.zoom.us

<https://us04web.zoom.us/j/77640425042?pwd=VWpGMmdSemRFaEZRcU95bG54VjBLQT09>  
11:32 am

We will continue the example in Next lecture  
12:14 pm

~ ~Sona ❤️ +91 70570 58859  
Ok sir  
12:14 pm

30 April 2021



# Number Theory

Shruti, +91 73502 84510, +91...



~ ~Sona +91 70570 58859

Ok sir

12:14 pm

30 April 2021

## Join our Cloud HD Video Meeting

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<https://us04web.zoom.us/j/78934840043?pwd=czFXSGNZSm8vSUUpoK09RaTU2UUZjdz09>

1:06 pm ✓✓

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<https://us04web.zoom.us/j/74349142716?pwd=T003UUUYwMGkyaUZRYzJJNmllcU1adz09>

1:47 pm ✓✓

3 May 2021

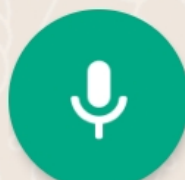
## Join our Cloud HD Video Meeting

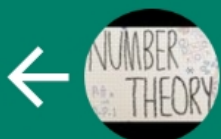
Zoom is the leader in modern enterprise video comm...  
us04web.zoom.us

<https://us04web.zoom.us/j/72742008662?pwd=d0V4ZzZleWppMTdZaEZtMkdFZnZqdz09>

11:24 am ✓✓

Message





# Number Theory

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3 May 2021

11:34 am

4 May 2021

## Join our Cloud HD Video Meeting

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<https://us04web.zoom.us>

[/j/78659941344?pwd=](https://us04web.zoom.us/j/78659941344?pwd=eldSa2p3TmU3T0l3TGtQbXUvbDRqdz09)

[eldSa2p3TmU3T0l3TGtQbXUvbDRqdz09](https://us04web.zoom.us/j/78659941344?pwd=eldSa2p3TmU3T0l3TGtQbXUvbDRqdz09)

2:32 pm

14 May 2021

~ Vidu Patil left

~ Pruthviraj added +91 77218 66270

17 May 2021

### CHAPTER - IV

#### THE KINEMATICS OF RIGID BODY

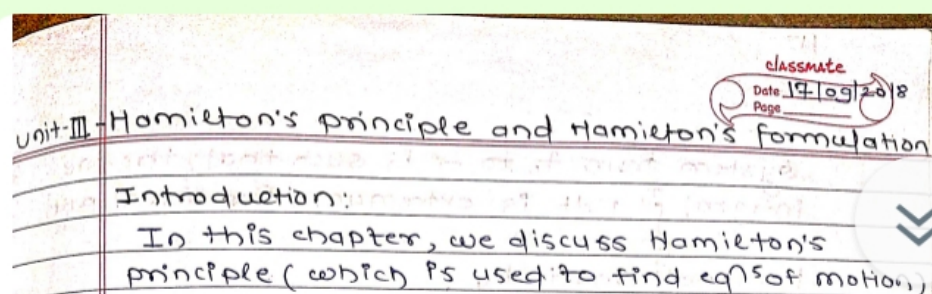


Chapter IV (1).pdf

53 pages • 311 kB • PDF

10:22 am

Forwarded



Message

